Accelerating the Implementation of the
ASEAN Sustainable Urbanisation Strategy

KAYSONE

Lao PDR

City Diagnostic Report

JULY 2021

UN HABITAT
FOR A BETTER URBAN FUTURE

Australian Aid

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CONTENTS

LIST OF ACRONYMS

AADCP II	Australia Development Cooperation Programme Phase II
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BRT	Bus Rapid Transit
CSTMP	City Sustainable Transport Master Plan
DONRE	District Office of Natural Resources and Environment
DPWT	District Office of Public Works and Transport
EIA	Environmental Impact Assessments
EWEC	East-West Economic Corridor
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GHGIs	Greenhouse Gas Inventories
ICLEI	ICLEI – Local Governments for Sustainability
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Cooperation Agency
LLU	Lao Labour Union
LWU	Lao Women's Union
LYU	Lao Youth Union
MONRE	Ministry of Natural Resources and Environment
MPWT	Ministry of Public Works and Transport
NEM	New Economic Mechanism
NORAD	Norwegian Agency for Development Cooperation
NSEDP	National Socio-Economic Development Plan
NUA	New Urban Agenda
PONRE	Provincial Office of Natural Resources and Environment
PPP	Public-private Partnership
PPWT	Provincial Department of Public Works and Transport
ROAP	Regional Office for Asia and the Pacific
SDGs	Sustainable Development Goals
SEC	Soupha Engineering Consultant
SSEZ	Savan-Seno Economic Zone
TOD	Transit-oriented Development
UDAA	Urban Development Administration Authority
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UN-Habitat	United Nations Human Settlements Programme
Urban-LEDS II	Urban Low Emission Development Strategies project
USD	United States Dollar
UXOs	Unexploded ordnances
VNR	Voluntary National Reviews

1. Introduction

1.1. OVERVIEW OF "THE ACCELERATING THE IMPLEMENTATION OF THE ASEAN SUSTAINABLE URBANISATION STRATEGY" PROJECT

1.1.1. The ASEAN Sustainable Urbanisation Strategy (ASUS)

In 2018, the Association of Southeast Asian Nations (ASEAN) officially recognised the importance of inclusive and sustainable urbanisation through the launch of the ASEAN Sustainable Urbanisation Strategy (ASUS). As one of the initiatives under the Master Plan on ASEAN Connectivity (MPAC) 2025 Strategic Area of Sustainable Infrastructure, the ASUS aims to assist local governments in the advancement of sustainable urbanisation in their cities. Based on the latest urban trends in the ASEAN region, the strategy identifies six priority areas and 18 sub-areas of sustainable urbanisation.

1.1.2. 'Accelerating the Implementation of the ASUS' Project

Acknowledging the need to enhance local capacities to implement the ASUS and thereby advance sustainable urbanisation, the project "Accelerating the Implementation of the ASEAN Sustainable Urbanisation Strategy (ASUS)" (hereafter referred to as the ASUS Project) commenced in March 2020. The ASUS Project is funded through the ASEAN-Australia Development Cooperation Program - Phase II (AADCP II) and implemented by UN-Habitat's Regional Office for Asia and the Pacific (ROAP) in collaboration with the ASEAN Connectivity Division under the Office of the Secretary-General, ASEAN Secretariat.

The ASUS Project seeks to support eight cities in the ASEAN region in the development of contextually feasible and financially viable project proposals, while disseminating knowledge and sharing lessons learned to accelerate sustainable urbanisation. The project focuses on medium-sized and intermediate, secondary

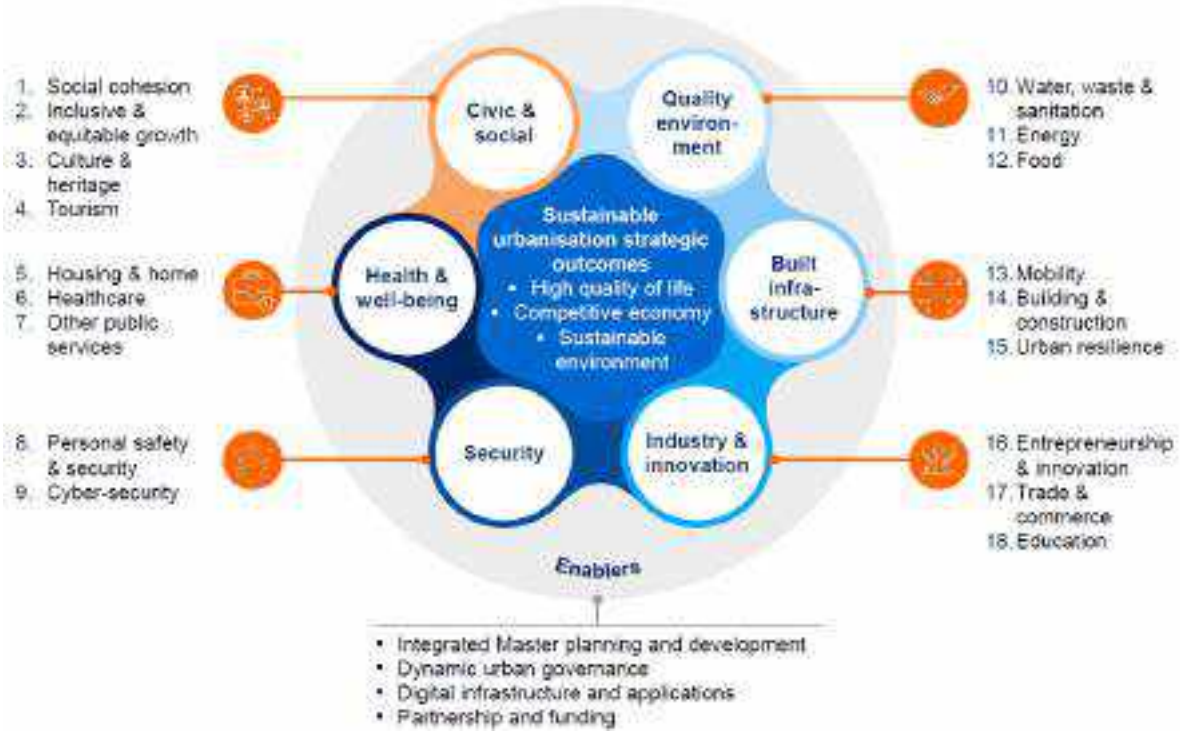


Fig. 1. ASUS Priority Areas and Sub-areas [Source: ASUS]

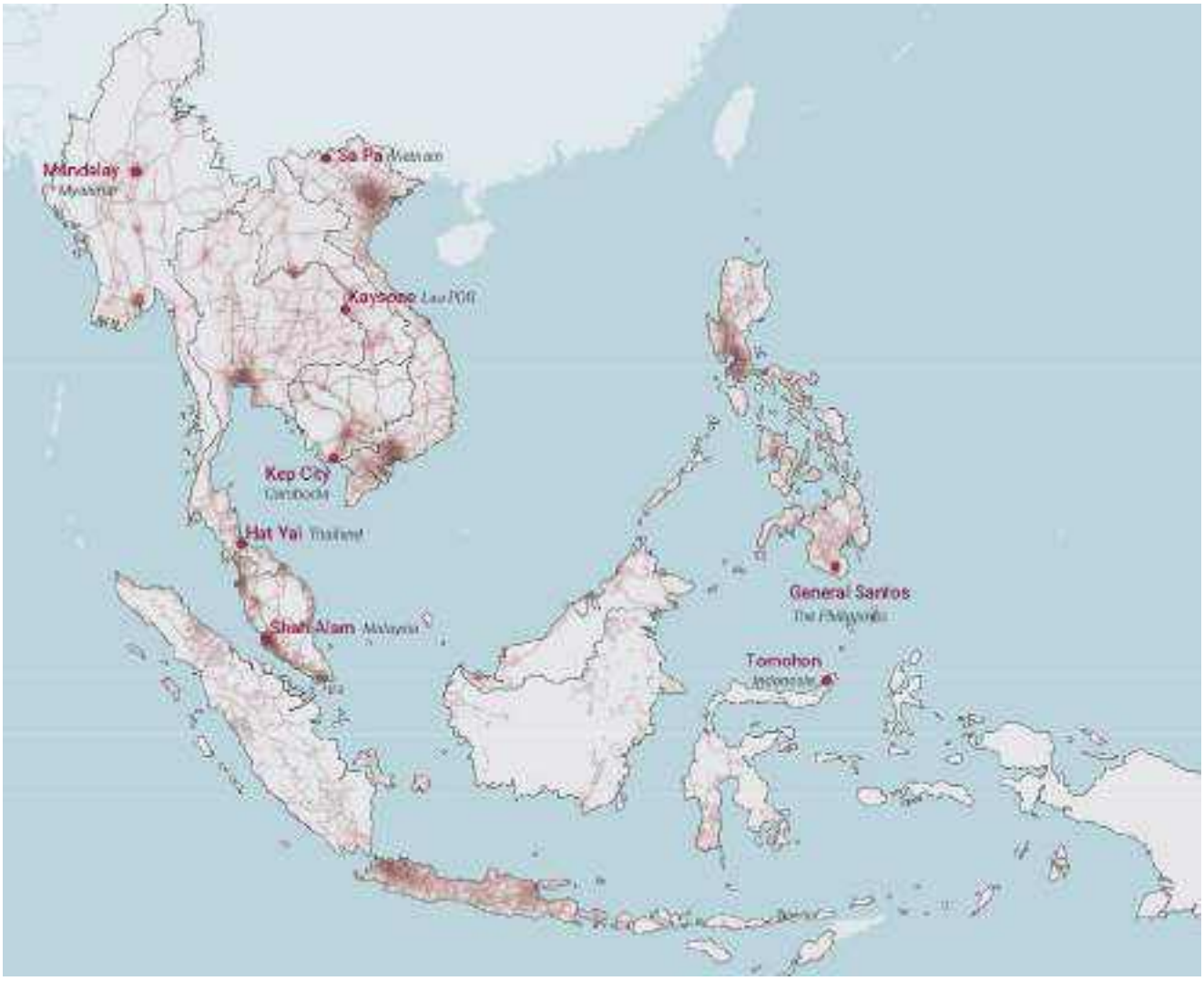


Fig. 2. Participating cities in the "Accelerating the implementation of the ASEAN sustainable urbanisation strategy" project

cities as these will see some of the most significant population and physical growth in coming decades.

The ASUS Project has the following objectives:

- Promote implementation of sustainable urbanisation projects within the ASUS Framework;
- Disseminate knowledge and lessons learned on sustainable urbanisation in the ASEAN to encourage other cities to adopt the ASUS into their urban development plans; and
- Expand the knowledge base on sustainable urbanisation in the ASEAN.

To achieve this, three main outputs will be delivered as part of the project:

- Technical support in the form of ASUS implementation proposals for up to eight (8) participating cities within the ASEAN, including the development of City Diagnostic Reports;
- ASEAN Sustainable Urbanisation Forum; and
- Report on the "State of Urbanisation in the ASEAN".

Since early 2019, ASEAN had opened a call for an expression of interest for ASEAN cities to participate in a project to implement the ASUS framework at the local level. Thirty cities applied through the submission of Action Templates aligned with ASUS. In February 2020 the 'ASEAN Sustainable Urbanisation Strategy (ASUS) Socialisation Forum for Cities', was organised to present the ASUS to the interested cities and propose activities for city officials to familiarise themselves with the framework and the upcoming project activities. Following the Socialisation Forum, UN-Habitat supported the ASEAN in the selection of the final participating cities through a series of selection criteria, including but not limited to: quality of the action templates proposed and their alignment with the ASUS, the participation of cities in ASEAN Cities Networks, and the city's rate of urbanisation.

The map shown in Figure 2 identifies the eight participating cities.

1.2. CITY DIAGNOSTIC REPORT

The City Diagnostic Reports are analytic documents that summarise and assess key aspects of a given city participating in the ASUS Project, including its overarching development trends and detailed information on key sectors. Each report seeks to provide an overview of the characteristics and conditions (spatial, legal, financial) of a given city, and thereby, to strengthen and complement the City Technical Proposals (described below). By framing the proposed project within these contextual characteristics of the city, project proposals will be better positioned to ensure their viability and impact.

The overarching objectives of the City Diagnostic report can be organised according to two scales:

Project and city scale:

- Providing background information on the urban context
- Validate the importance and relevance of the project for the city and its development plans
- Analysis of the characteristics and pre-conditions of each city to assess the viability and potential impact of the proposed project in its context
- Better understand the city's spatial, financial and legal barriers and enablers to successful implementation and management of the project
- Identify synergies with partners and ongoing or upcoming projects to provide strategic urban development guidance, identifying potential opportunities for replicability and scalability

Programme scale:

- Analyse the projects' contributions to the implementation of the ASUS
- Analyse the projects' alignment to the SDGs and the contribution to the achievement of sustainable and inclusive urbanisation
- Inform the Report on the State of Urbanisation in the ASEAN
- Allow for comparison across cities in the ASEAN
- Learn from and incorporate lessons from global standards and good practices

Based on both quantitative and qualitative research, the City Diagnostic Reports were developed by UN-Habitat with input from dedicated focal points at the relevant city authorities and agencies. Initial desk research was substantiated with data and information shared by the focal points through online questionnaires, city reports and other documents, and key informant interviews. Where possible, the City Diagnostic Reports sought to leverage existing information. However, due to gaps in available information, some figures used within the report are outdated. In some instances, the analyses of the city are based on subjective assessments from key informant interviews.

While all City Diagnostic Reports follow the same structure and baseline criteria, each report is unique in that it is appropriately focused and tailored to the needs of the participating cities.

1.3. CITY TECHNICAL PROJECT PROPOSAL

1.3.1. Introduction

Building on the evidence of the City Diagnostic Reports, each city – with support of UN-Habitat – will develop a City Technical Proposal, which captures the detail of the proposed projects that will support the implementation of the ASUS across the ASEAN. The City Technical Proposals describe the projects' (i) aims and objectives, (ii) context and rationale, (iii) scope and focus, and (iv) implementation modalities.

During the development of the City Technical Proposals, UN-Habitat will provide capacity building for the participating cities to assist them in developing their proposals. Throughout this process, UN-Habitat ensured attention to gender balance and representation of groups in stations of vulnerability such as youth, older persons, persons with disabilities, children and indigenous groups.

Synergies with ongoing projects and activities were mapped out to ensure effective contribution of the City Technical Proposals to the cities' existing development priorities in line with the ASUS.

1.3.2. Summary of Kaysone Phomvihane's Technical Proposal

Kaysone Phomvihane proposes the development of a long-term comprehensive city transport masterplan. Kaysone Phomvihane has long sought to develop the public transport sector; it has been identified as one of the city's top priorities to achieve sustainable urban development and better quality of life. The project proposed for Kaysone seeks to build on this priority in the development of a feasibility study for the design and management of the transport system,

The project includes:

- An assessment of the current public transport system in urban and peri-urban areas, using baseline information collection, stakeholder engagement, survey and design;
- An assessment of capacity at local levels, with the

provision of workshops and training to address gaps;
- Identification of gaps and areas of opportunity for building on Kaysone's trade and traffic flows
- Identification of gaps and areas of opportunity for the incorporation of the Bus Rapid Transit System and a traffic management system in the current and future mobility system;
- Definition of a City Sustainable Transport Master Plan (CSTMP) and its implementation plan;
- Community level consultations and provide stakeholder engagement plans;
- A business model for sustainable and successful implementation; and,
- A strategy document for monitoring and reporting against the Sustainable Development Goals (SDGs), in particular to provide access to safe, affordable, accessible and sustainable transport systems for all (SDG target 11.2)

Once implemented, the project can make a significant contribution to Kaysone's development objectives and thereby, to the improved wellbeing of its population. The aims of the project would be:

- Improved quality and efficiency of public transport in the city;
- Reduce incidences of traffic accidents;
- Improved monitoring and management of public transport;
- Increased connectivity and quality of life for all;
- Increased attractiveness of the city for investors; and,
- Improved livelihood for workers and inhabitants in urban and rural areas.

1.4. URBAN OVERVIEW

Kaysone Phomvihane (also referred to as 'Kaysone'), is the capital of Savannakhet province[1], with a population of 126,411 and is the second largest city in Lao PDR after the capital Vientiane.

Kaysone is an economically and culturally important border city in Lao PDR. Its strategic location across the Mekong river from the town of Mukdahan in Thailand, offers considerable opportunities for economic growth and investments. It is bounded to the west by the Mekong river, and to the east, north and south by the districts of Outhomphone, Xaibouli and Champhone respectively.

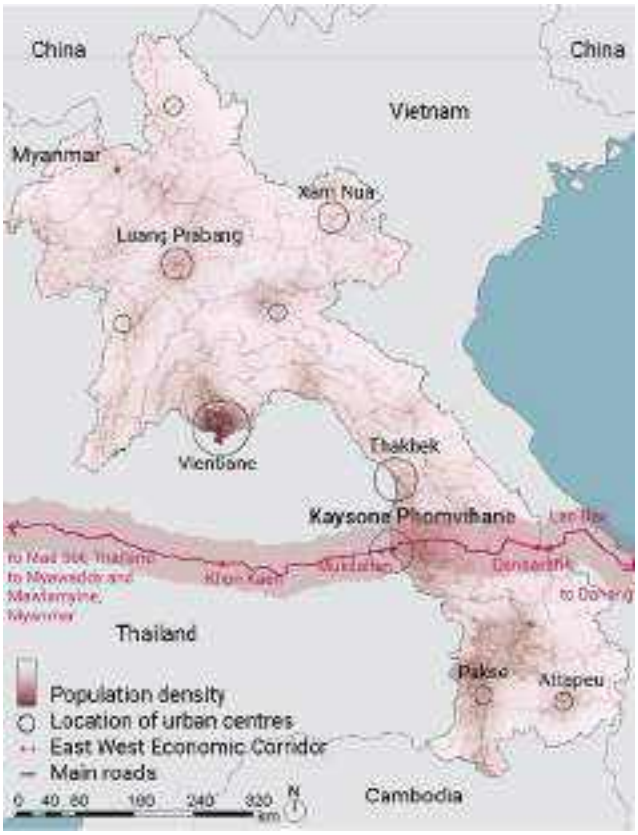


Fig. 3. Location of Kaysone Phomvihane and other major cities in Lao PDR in relation to major roads, population density, and the East-West Economic Corridor (EWEC)

Fig. 4. Location of Kaysone Phomvihane in relation to Savannakhet province

Fig. 6. Kaysone's architecture (Source: Shutterstock/amnat30)

Year	Population in City	Total Population in Savannaket Province
2015	126,411	978,906
2025 (projection)	147,551	1,148,031
2035 (projection)	168,671	1,294,367
% change	33.4	31.0

Table. 5. Current and project population numbers in the city of Kaysone Phomvihane and administrative boundaries.102

The city serves as a major agricultural processing centre and emerging prime destination for manufacturing industries and business enterprise. The city lies on the East-West Economic Corridor: And area strategically designated to promote the development and integration of 5 Southeast Asian countries (Myanmar, Thailand, Lao PDR, Cambodia and Vietnam). With the increase of cross-border trade and commercial exchanges between Kaysone and Mukdahan, the city is emerging as a dynamic economic attraction for public and private sector investments.[2]

Previously named Khanthabouli, the city was renamed in 2005 from to honour the locally born Lao PDR president, Kaysone Phomvihane. Both the city and the province are experiencing high population growth and the overall influx of people from rural into urban areas has been increasing country-wide, due to infrastructural improvements and the higher rates of work opportunities in cities. Lao PDR's urban population has increased from 20.99 per cent in 1999 to 35.64 per cent in 2019.[3] Over the past decade, the population of Savannakhet province in which Kaysone lies, has increased by 20 per cent, while the city's population has increased by 1.5 per cent.[4] The population is projected to grow from the 2015 figure of 125,622 to 147,233 in 2025 and 159,396 in 2030.[5]

1.5. PROBLEM STATEMENT

Kaysone Phomvihane is an important city strategically, culturally and economically for Lao PDR. The city's economy has been expanding and it serves as a dynamic economic centre for public and private sector. This economic expansion is heavily reliant on the city's location and connectivity; Kaysone is accessible by land, air and water, enabling mobility across the border to Thailand, Vietnam and nearby cities within Lao PDR.

Kaysone's economic growth, has impacted both the function of the city and the quality of life experienced by residents; vehicle ownership and reliance on private transportation have increased in the past years, leading to traffic congestion during peak hours and increased traffic accidents. There is no public parking in Kaysone,

disturbing traffic flows and increasing congestion, particularly in the urban centre. Formal urban public transport is limited in the city, and residents rely largely on tuk-tuks and mini-buses.

These challenges have made improvements to mobility and the transport sector a necessity for sustainable and inclusive growth. Based on initial research and consultations, the city does not have any plans, roadmaps or strategies for public transport that align all existing initiatives and stakeholders with the city's urban transport challenges. As such, the city aims, in the long term, to develop an integrated public transportation masterplan, involving all stakeholders that will function in line with SDG Target 11.2 to provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety and expanding public transport. Improving the mobility and transport sector is also a necessity under the Eighth Five-Year Socio-Economic Development Plan, which aims to grow the economy and ensure green and sustainable development in line with the SDGs.

1.6. IMPACT OF COVID-19

Lao PDR was the last Southeast Asian country to become infected with COVID-19, with the first case confirmed on 24 March 2020.[6] As of 28 May 2021, Lao PDR has had a total of 1,895 cases and 2 deaths since the beginning of the pandemic, with the majority of the cases recorded in April and May 2021.

The negative economic impact of COVID-19 has been felt as efforts to contain the pandemic continue to be in place. On aggregate, the poverty rate (measured as $3.20 a day, 2011 PPP) is expected to increase by 1.7 percentage points in 2020, as compared with a non-COVID-19 scenario. All economic sectors have experienced adverse effects of varying intensity.[7] Declining trading volumes and tourism have put thousands of jobs at risk, threatening livelihoods. This negative economic impact has disproportionately affected informal workers, who lack social protection. Hospitality, transport, and manufacturing continue to be adversely affected, and 2.6% of businesses had permanently closed while 7.4% remained temporarily closed. Food insecurity remains elevated across the country.[8]

Fig. 7. Non-motorized transport in Kaysone's historical centre. (Source: Shutterstock/amnat30)

2. Key Challenges for Urban Planning and Management

Based on consultations with city authorities and the analysis undertaken through the development of the city diagnostic report, a number of challenges have been identified for the management and planning of Kaysone. These challenges are highlighted below to inform the development of the technical proposal and identify strategic areas in which the project may contribute.

2.1. INTEGRATED PLANNING

For the project to have the desired effects across not only mobility, but social and economic cohesion and growth, it must be supported by an integrated approach. Integrated planning has been identified in Lao PDR as a challenge that limits sustainable urbanisation; this includes both horizontally planning (different sectors and departments), and vertically planning (different levels of government). The current approach towards coordination between departments limits especially horizontal integration and promotes a siloed approach to the city management. Moreover, recently implemented projects in Savannakhet have identified the need, at the sub-national level, to provide practical training sessions rather than one-off theory-based workshops. A study by JICA (2010) found that the Public Works and Transport Institute (PTI) prepared most of the 116 urban master plans that were approved between 1991 and 2007. Lack of resources and technical knowledge at the local level is critical and threatens the implementation of comprehensive initiatives. Community engagement across all phases of planning is uncommon but much needed improve sustainability and build capacity at all levels in Kaysone Phomvihane.

2.2. EVIDENCE-BASED PLANNING

To support future growth and development of the city, the use of data to inform decision making processes is vital. Kaysone previously benefitted from an in-house spatial planning unit that supported the collection and analysis of GIS data, however, the planning team was dissolved five years ago. The lack of spatial planning units that could assist in data collection to support decision-making processes could hinder the development process of evidence-based urban plans and strategies to support the city's future growth.

2.3. ENFORCEMENT

Political will and long-term commitment are key challenges that present risks to project implementation. The city also indicated that strategies for legal enforcement, monitoring and follow-up are limited and could hinder project implementation in Kaysone.

2.4. PROJECT FINANCE AND PROCUREMENT

Financing and funding have been highlighted as the biggest challenges the the implementation of urban projects in Kaysone. A deeper examination of the city's financing and funding streams to identify possible leverage opportunities can ensure that this challenge is addressed. Examples could include Rapid Own Source Revenue Analysis.

2.5. PARTICIPATORY PLANNING AND SOCIAL INCLUSION

Stakeholders and communities are typically engaged through open consultations, public hearings, project steering committees or institutional mechanisms. Such mechanisms are vital to ensure that urban projects address vulnerable groups and are accessible and affordable for all. An efficacy study of existing practices would greatly benefit future project management and implementation.

2.6. ENVIRONMENTAL AND SOCIAL IMPACT

Conducting economic, environmental and social impact assessments during urban project development can help build the city's technical capacity. While such assessments have not been identified as a challenge by the city, embedding them into urban projects can ensure that projects can maximise environmental and social impact. This is essential for the case of Kaysone, where the impact of climate change on health, physical infrastructure, the local economy and livelihoods are already visible

2.7. CAPACITY AND TECHNICAL FEASIBILITY

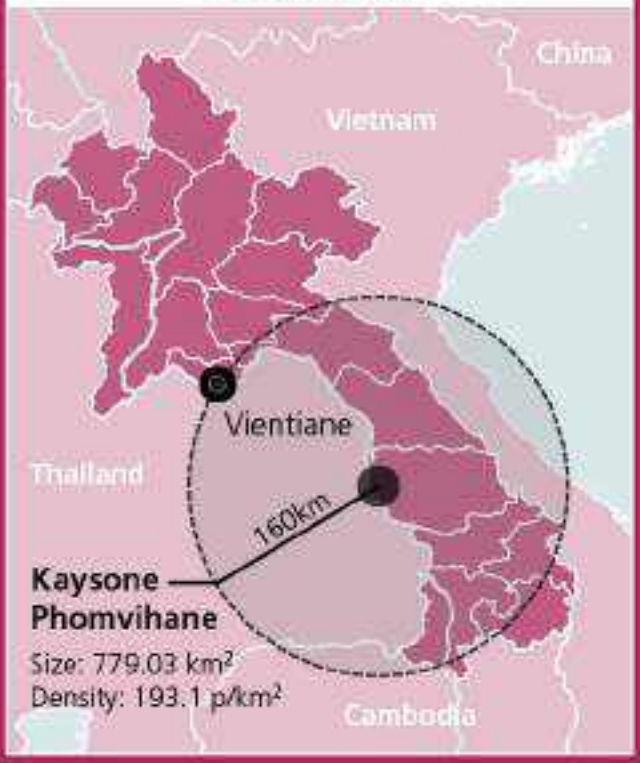
The city indicated that technical feasibility could prove a challenge to the implementation of new urban projects, particularly in relation to the transport sector. The city's considerable size means that urban management capacity is key to ensure the long-term impact of projects. Identifying capacity gaps and training requirements in accordance with the project scope during the project design phase could anticipate and rectify challenges to feasibility.

Project maintenance and long-term upkeep are crucial challenges to address in order to maximise durability and impact, while also demonstrating the potential for replicability, scalability, and functional integration with other sectors within the city.

Fig. 8. Kaysone's historical centre. (Source: Shutterstock/amnat30)

KAYSONE PHOMVIHANE

CONTEXT

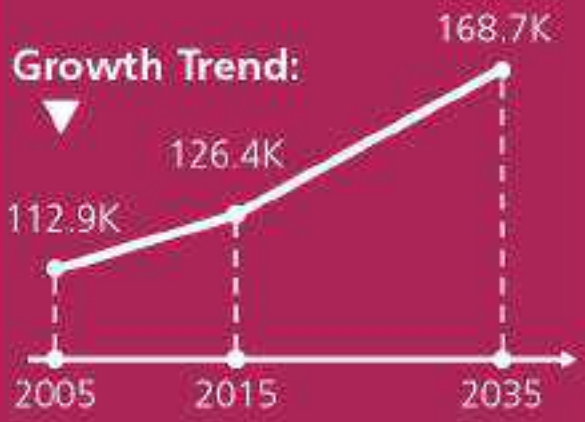


POPULATION

126,411 (2015)

Urban	Rural
73%	27%

Growth Trend:



KEY CHALLENGES [103]

Implementation Challenges

1. Project finance & procurement
2. Long-term upkeep and maintenance
3. Political will and long-term commitment

What Limits Sustainable Urbanization?

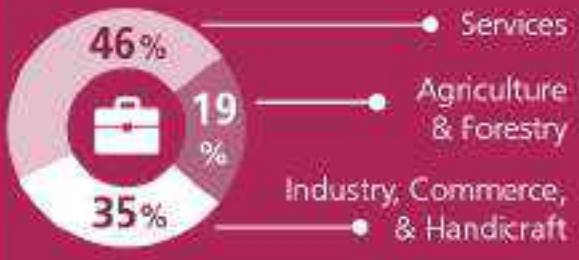
1. Evidence-based planning
2. Horizontally integrated planning

ECONOMIC INDEX

Economic Growth Rate (2011-15): **9.00%/yr.** (National: 6.8%)

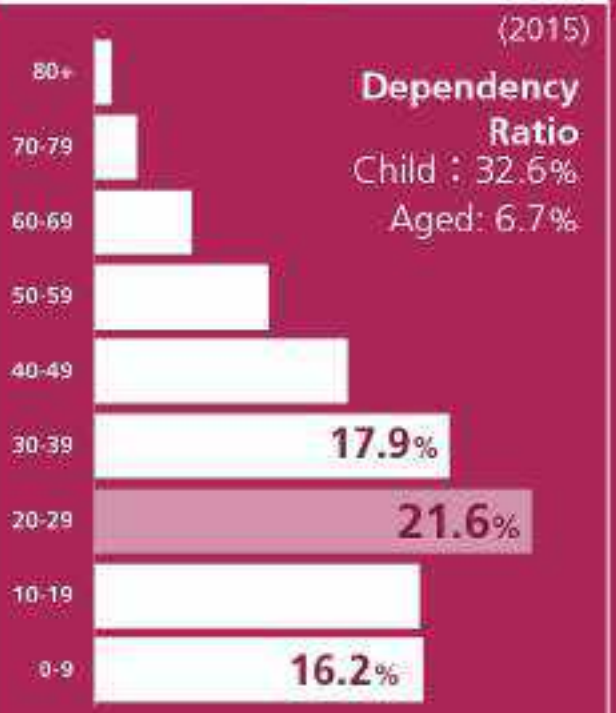
Annual Per Capita Income (2019): **2,892 USD**

Economic Sectors: (2014)

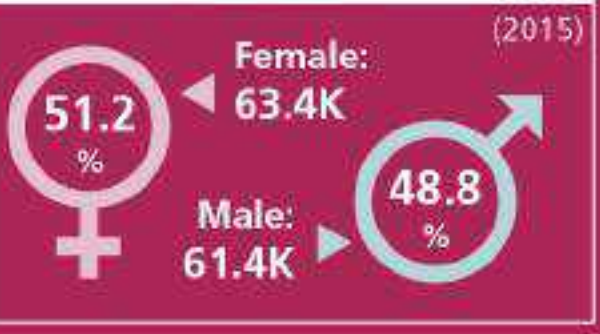


CITY SUMMARY

AGE



GENDER



HOUSEHOLD

Average Household Size (2015) **5.9**

Total number of Households **21,132**

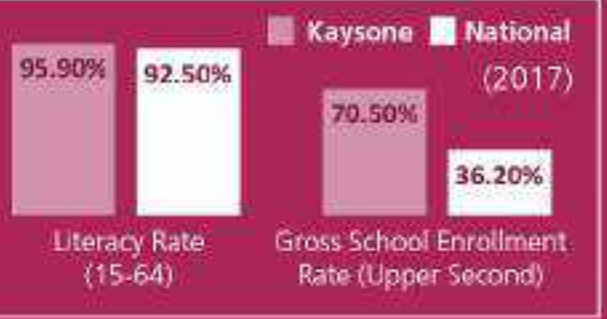
EMPLOYMENT

Unemployment Rate (2017) **33.5%** (National: 31.2%)

Self-Employment Rate Age 16-64 (2017) **61.8%** (National: 83.1%)

VEHICLE REGISTRATION

EDUCATION



PUBLIC TRANSIT

No official public transit system;
Aiming to develop EV bus services

3. Governance and institutional environment

3.1. URBAN GOVERNANCE

3.1.1. Institutional and Administrative Framework

The Lao PDR government operates according to the principle of democratic centralism, where responsibility is devolved to increasingly local administration levels. Sub-national levels include the province, district and village, with a small number of cities operating as a distinct entity. The government at each level functions as an extension of the level above, and administrative structures are replicated. The Law on Local Administration of the Lao PDR designates local administrations to represent the locality in all capacities. Directives come from the central level, and each level must report to the level above in their delegated capacities.[9]

There have been various efforts to build up local level administration. The New Economic Mechanism (NEM) was introduced in 1986 to liberalise the economy, whilst also providing provinces with a significant devolution of powers to manage political, economic and socio-cultural affairs, and human resources. Provincial/city governors were given complete power over expenditures, revenues and interest rates. These policies had several important consequences, including a significant reduction in tax revenues for the central government.[10] The section on finance will further examine the impact of these devolutions on revenues and expenditures in Kaysone City.

A resolution on decentralisation and local government that invokes the concept of Sam Sang (translated to three builds in English) was adopted in 2000 by the Prime Minister. Provinces were seen as strategic units, districts as budget planning units, and villages as implementation units. The Sam Sang policy comprises three complementary dimensions: political and administrative decentralisation, and development. The policy enables local governments to effectively manage responsibilities devolved from higher levels, and ministries to manage the decentralisation process in their sector. However, this has yet to be fully implemented; a 2015 study found that administrative decentralisation began in 15 targeted ministries but administrative budgets had not yet been allocated to enable lower levels to carry out their new functions.[11]

The town of Kaysone Phomvihane was officially declared a city in 2018 during a ceremony held on May 25th. Prior to that, the city was classified as a secondary town, together with Luang Prabang, Pakse and other provincial capitals. In order to attain a city status in the country, a town must have a population of at least 60,000 people and be financially self-sufficient in regard to administration costs.[12] Currently, only Vientiane, the national capital, Luang Prabang and Pakse share this status with Kaysone, highlighting urbanisation as an emerging issue in Lao PDR.

3.1.2. Institutional Actors and Roles

3.1.2.1. Governmental Actors

In Lao PDR, the mayor holds the highest position of authority in a city, and steers a cabinet that acts as an administrative secretariat. The standard duration of one electoral term for the city administration is five years. The Mayor of Kaysone is in charge of the following responsibilities:[13]

- Ensure effective implementation of constitution, laws and rules of the State;
- Convene and preside over city administration meetings;
- Study and develop strategies for provincial or city socio-economic development and budget plans;
- Implement the socio-economic development plan, the State budget, measures for the defence and security of the city, the prevention of negative occurrences; and the monitoring and inspection of central government projects being implemented in the city;
- Issue decisions, orders, instructions, notifications and other regulations in accordance with the laws;
- Implement citizen management at the local level;
- Suspend or cancel the acts of lower-level local administrations that conflict with laws and regulations, or propose to higher-level authorities that they cancel the non-compliant acts of other sectors;
- Cooperate with international organisations as assigned by the government; and,
- Exercise other rights duties as provided by the laws.

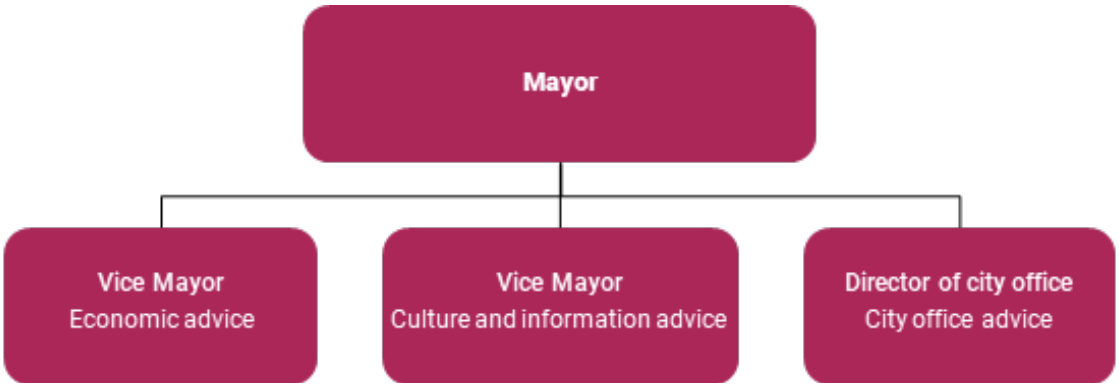


Fig. 9. Organogram of the mayor and associated cabinet

Level		Administration
Central	Ministry of Natural Resources and Environment (MONRE) Ministry of Public Works and Transport (MPWT) Etc.	**National Government**
Provincial	Provincial Department of Public Works and Transport (PPWT) • Housing and Urban Planning Unit • Roads-Bridges Unit • Transport Unit • Etc. Provincial Office of Natural Resources and Environment (PONRE) • Environment Unit • Pollution Control Unit • Water Resources Unit • Land Management Unit • Etc.	**Provincial administration Office/Governor**
City and District	District Office of Public Works and Transport (DPWT) District Office of Natural Resources and Environment (DONRE) City Office of Public Works and Transport City Office of Natural Resources and Environment	**City/District Administration Office/Mayor**

Fig. 10. Organogram of relevant actors and relationships in Kaysone Phomvihane City

Various agencies and departments are in charge of the responsibility of defining and implementing the land use plan. As previously stated, governments at each level act as an extension of the level above. As such, each department at city level will report to those at provincial level, followed by the national level. Local governments have the authority to make decisions that impact the level of their own purview but major decisions are made at the central level, and lower levels are directed to implement them.[14] As such, lines of coordination are clearly established between ministries and provincial governments.

While such lines of coordination could ensure coordination at national level with donors and programmes, the established structures could make coordination between different departments challenging; it could re-enforce silos and blocks possibilities of horizontal integration due to continuous reporting to higher levels and a lack of willingness of collaboration. Coordination between departments and divisions within the city is based on regular consultation meetings and monitoring among the relevant offices.

At city level, the City Office of Public Works and Transport is responsible for land use zoning, management of transportation, housing and urban planning, water supply and sanitation management. The City Office of Natural Resources and Environment is responsible for coordinating and managing natural resources and environment, which includes land use management and titling, water, climate, biodiversity, social and natural environment and natural disasters. The City Office of Housing and Urban Planning- defines the appropriate use of lands within administrative boundaries.[15]

The Urban Development Administration Authority (UDAA) in Kaysone is responsible for the maintenance and repair of city infrastructure. This authority was established by the Lao government in Vientiane, Kaysone and three secondary towns and cities between 1997 and 1999.[16] The main task for UDAA was the management and implementation of ADB-financed urban infrastructure projects, which provided technical and managerial support to the UDAA staff for the duration of projects, highlighting potential alterations and improvements to government structures.

The Provincial Office of Public Works and Transport (PPWT) for Savannakhet Province acts as secretary of transportation, housing and urban planning, water supply and sanitation management at the provincial level. The Provincial Office of Natural Resources and Environment (PoNRE) for Savannakhet acts as secretary in the management of natural resources, which includes, as indicated above, land use management, water, climate, biodiversity, social and natural environment, natural disasters and safeguarding work to reduce climate change factors at the provincial level.

The Ministry of Public Works and Transport is responsible for macro-management of transportation, housing and urban planning, water supply and sanitation throughout the country, coordinating with the Public Works and Transport Department and the Housing and Urban Planning at provincial and city levels through the Public Works and Transport Institute and Department of Housing and Urban Planning respectively. The Ministry of Natural Resources and Environment is responsible for macro-management on natural resources and environment, which consists of land use management, water, climate, biodiversity, social and natural environment, natural disasters and safeguarding work to reduce climate change factors at country level.

3.1.2.2. Non-governmental Actors

Non-government stakeholders, such as academia, civil society groups, NGOs, and women and youth groups are typically engaged in urban projects managed by the city. Consultations take place through regular communications and updates with key groups or through project-specific open consultations and public hearings. Project steering committees and other similar institutional mechanisms are also utilised to engage stakeholders.

Within the Lao context, the are four mass organisations that have composed the civil society sector since 1975: Lao Women's Union (LWU), Lao Youth Union (LYU), Lao Front for National Construction (LFNC) and the Lao Labour Union (LLU). They remain important linkages between the state and citizenry, particularly in areas where the Tai-Lao language groups are spoken.[17] There is no evidence of a legal framework and guideline for the operation of civil society groups. Participatory techniques fit well with traditional decision-making processes of villages and urban centres, yet this is not a legal requirement. [18]

3.2. PLANNING INSTRUMENTS AND PROCEDURES

3.2.1. Laws and policies related to urban planning

The 1999 Law on Urban Plans "determines principles, regulations and measures regarding the management, land use, construction and building of structures at national and local levels to ensure conformity with policies and laws, aiming at urban development to

meet the direction of the national socio-economic development plan, ensuring that all social activities in the city maintain order, safety, discipline, hygiene, [and] civilization, as well as preserving ancient places, [and] the architectural work of cultural structures, meanwhile protecting the environment and natural scenery."[19]

Under the 1999 law, urban plans are defined as graphic spatial plans/drawings, feasibility reports, and regulations relating to the management of cities. The law also sets out the definition of a city as:

- *"the location of the capital city of the country, or of a municipal city, a provincial city, a special zone city, a district city, or an area of socio-economic concentration;*
- *It has a public infrastructure and supply system, such as: road networks, sewerage systems, hospitals, schools, stadiums, public parks, water supply, electricity, telephone, and others."* [20]

The 1999 Law identifies urban planning at four levels. At all levels urban planning is used to determine land demarcation and future construction and expansion of cities, and set zones for socio-economic development, forests, conservation, forests, natural resource areas, military and defence zones and road networks.

- At national level, urban planning is used for general medium and long-term planning for the whole country and is the responsibility of the Ministry of Public Works and Transport (MPWT).
- At regional level, urban planning is used for major medium and long-term planning for a particular region in greater detail than at the national level and is the responsibility of MPWT in collaboration with concerned sectors and local administrations.
- At provincial level, urban planning is used as the primary medium for long-term planning of provinces in greater detail than the regional level work and is the responsibility of MPWT in collaboration with concerned sectors and local administrations.
- At district levels, urban planning is concerned with the allocation of areas for residences, offices, agriculture, industry, trade and services, road networks, transport, culture, sports, public parks, military and defence zones, public utilities and others.
- Provincial, municipal and special zone administrations are responsible for the study and design of urban plans for cities, before submitting plans to MPWT for consideration and approval. [21]

The 1999 Urban Planning Law was revised and approved in November 2017. There is also work underway on drafting a Land Use Law.[22] The revised law has two articles relating to climate change and the environment. The first requires that risks posed by climate change must be taken into the consideration for any construction. The second concerns environmental impact assessments (EIAs).[23]

3.2.2. Hierarchy and Consistency of Plans

A report by the Asian Development Bank (ADB) on the urban development sector in Lao PDR has revealed that poor enforcement and lack of efficacy has rendered the planning system unsuccessful in guiding and managing development according to the plans. Most masterplans are produced centrally by the Ministry of Public Works and Transport or the Public Works and Transport Institute, under the Ministry of Public Works and Transport. [24]

All local plans are developed in accordance with the National Urban Development Strategy. The Urban Development Strategy 2030, devised by the Ministry

Fig. 11. Urban Development plans and their relation to each other in relation to Kaysone

of Public Works and Transport, emphasises the need for development under urban development plans at all district and city levels, while ensuring enforcement and implementation of the plans. The plan also prioritises the need to close the gap between urban and rural development in terms of infrastructure and environmental protection, and to strengthen staff capacity in cities.[25]

The Savannakhet Urban Development Strategy 2020, adopted in 2009, envisions the city as an international and regional core with an active exchange of people, goods and information and has guided the development of the masterplan for Kaysone. The plan had an initial phase (2010-2020) to promote the Special Economic Zone in the province, and a second phase to expand support trade to serve industries within the Special Economic Zone.[26]

The masterplan is further supported by Land Use implementation and an infrastructure development plan. To support the masterplan and the implementation of the national urban development strategy at local level, a socio-economic development plan has been prepared.

3.3. CITY DEVELOPMENT PLANS AND PRIORITIES

3.3.1. Spatial

The Master Plan of Kaysone Phomvihane developed by the Public Works and Transport Institute and approved by the National Government in 2001, sets out the land use and zoning scheme for the city. Based on consultations with the city, the master plan is now being revised and updated by the Department of Public Works and Transport (DPWT) of Savannakhet with Japanese support in both technical assistance and funding (JICA).

3.3.2. Socio-Economic

Kaysone Phomvihane Socio-Economic Development Plan developed by the Mayor of Kaysone Phomvihane in consultation with the cabinet and departments, supports the Master Plan of the city and identifies key infrastructure projects for priority investments, including urban infrastructure for water supply, sanitation, roads, drainage and flood control. As the city is a touristic attraction, it also includes priority support to tourism development and environmental protection.[27] The plan is redeveloped every five years, the most recent of which was developed for 2020-2024.

After the conclusion of each five-year plan period, a report is developed by the city to assess reporting, enforcement, and implementation of the socio-economic development plan, that provides directions for the new plan period. The implementation report for the period of 2015-2019 highlights many challenges and opportunities for the city. Some of the achievements that the report highlights include: strength of the political system, growth of the economy, improvements to grassroots political development in rural areas to strengthen unity, a structural economic shift towards proactive manufacturing goods, and making the economy and society favourable to services, tourism and investment. The report highlights the role of women and the effort of the city in expanding the protection of interests of women and children legally, by establishing and coordinating with women's unions to ensure equal opportunities. In the urban context, the report highlights key achievements such as the protection and management of five parks, protecting ornamental trees, improving road quality and coverage, cleaning and repairing ditches, embankments and canals.[28]

The Eighth Five-Year Socio-Economic Development Plan (2020-2024), focuses on vision 2035 "to make Kaysone Phomvihane a strong political, administrative, national defence and security centre, to be the centre for modernization of industry, trade and services, socio-cultural development linked to the development of quality human resources, and to create a more environmentally-friendly city".[29] The city also includes a strategy to align the plan 2030, with the 2030 Agenda for Sustainable Development (SDGs), aiming to build Kaysone Phomvihane into a strong city, comprehensive development, a peaceful society, with a high level of awareness and vigilance, while also making the city orderly, attractive, civilised, modern, lively, with a good environment. [30]

The direction for the Eighth Five-Year Socio-Economic Development Plan (2020-2024) is as follows: [31]

- Continuously grow the economy, while also balancing development and capital with the conditions for industrialisation and modernisation;
- Ensuring green and sustainable development, in line with the SDGs, with economic development at the centre. Ensuring harmony between economic development, socio-cultural and environmental protection, responding to natural disasters in a timely manner and addressing poverty and development issues;
- Develop quality human resources as a decisive factor in development, build a skilled and disciplined workforce. Preserve and build specialised technical expertise, strengthen

civil servants, enterprises and entrepreneurs to enhance regional and international competitiveness;
- Maintain political stability, ensure peace and order in the society. Build a society of harmony, democracy, justice and civility; and,
- Continue to expand cooperation with the districts of neighbouring countries in a variety of mutually beneficial ways.

3.3.3. Environmental

The Eighth National Socio-Economic Development Plan identifies natural resources and the environment as a key consideration for the implementation of the plan: "*Natural resources and the environment are effectively protected and utilized according to green-growth and sustainable principles; there is readiness to cope with natural disasters and the effects of climate change and for reconstruction following natural disasters.*"[32]

Under this section of the plan, three outputs have been identified as necessary:

i. Environmental protection and sustainable natural resource management: To ensure continued quality in green and sustainable economic growth, development and natural resource management (of land, forests, biodiversity, mineral resources, water and wetlands). This has been identified as a key priority in order to achieve sustainable urban and rural development in harmony with natural resource management that contributes to people's well-being and health. The outcome places special emphases on public awareness and understanding of economic and social benefits associated with considered resource management.
ii. Preparedness for natural disasters and risk mitigation: Ensure public involvement to minimise GHG emissions, increase and enhance the ability to adapt and prepare for climate change by integrating climate change and risk mitigation with strategic and operational plans of the sectors concerned.
iii. Reduced instability of agricultural production: to encourage sustainable development with stable and continued economic growth, to foster stable job markets for farmers. This output places emphases on ensuring stable supplies, markets and prices for agricultural products, and diversification of agricultural products or raw materials to increase value addition and reduce dependency on rice farming and cash crops.

Lao PDR has carried out two national greenhouse gas inventories (GHGIs) in preparation for its two national communications. The second GHGI was carried out in accordance with directives from the Intergovernmental Panel on Climate Change (IPCC), and identified mitigation actions that include the recognition of the importance of mainstreaming climate change action into development plans to ensure climate change mitigation and resilience building. As such, significant causes of future emissions were considered in the creation of prioritiy sectors, as illustrated in the table below. The key objective is to increase the resilience of urban infrastructure.

Sector	Objective	Target year
Forestry	Increase total forest cover to 70% of land area	2020
Renewable Energy	To increase the share of renewable energy to meet 30% of energy consumption	2025
	To increase the share of biofuels to meet 10% of the demand for transport fuels	2025
Large-scale hydroelectricity	2.3GW will be added to increase total hydropower electricity production to approximately 5.5GW	2020
Rural electrification	Make electricity available to 90% of rural households	2020
Transport	Implement nationally appropriate mitigation actions to provide buses and develop the road network to cut down vehicle kilometres travelled	
Climate change	Implement climate change action plans	

Fig. 12. Objectives of the Greenhouse Gas Inventory based on sector.[104]

At city level, a recent presentation on paths to addressing climate change vulnerability and adaptation by the Asian Development Bank (ADB) revealed that there are currrently no climate change adaptation plans in Kaysone. The presentation also states that infrastructure planning in the city does not account for climate change mitigation, nor adaptation.

3.4. ONGOING AND PLANNED PROJECTS

The city has had strong engagement with international development banks and agencies. A recent project with the Cities Development Initiatives Asia aims to identify and prepare infrastructure projects for solid waste management, wastewater management and streetscape improvement. The outcomes of these studies will be incorporated into the Liveable Cities Investment Programme of the Asian Development Bank (ADB) in Lao PDR, which is set to begin in 2021.[33] An inception workshop was held with the local government in January 2020 to set out projects related to the enhancement of roads, environmental monitoring, landfill improvement, 100% waste collection coverage, and natural drainage improvements among their priority measures.[34]

The Urban Roads Project, part of the Liveable Cities Investment Programme funded by the ADB, aims to make Kaysone an attractive and competitive city for increased trade and investment along the East West Economic Corridor. The project focuses are to:

- "Improve and widen the main urban roads to cater for the expected traffic growth
- Strengthen the road pavement to prolong the service life of urban roads
- Build proper drainage structures to mitigate flooding events and improve accessibility
- Reduce traffic congestion, road user costs, and environmental pollution
- Improve the conditions for pedestrians by providing sidewalks and marked crossings
- Improve traffic safety for all road users
- Enhance the urban landscape by the planting of trees along the perimeter of the roads, and of ornamental plants on mid road dividers" [35]

The city has also been engaged with the ADB in various projects and workshops to increase Climate Resilience, and to build Kaysone as a clean city with strong economic growth, environmental sustainability, build awareness of environmental protection and improve natural resource conservation to reduce the impacts of climate change.

Fig. 13. Aerial view of the city. (Source: Shutterstock/ Phoutthavong Souvannachak)

Kaysone worked with ICLEI Southeast Asia Secretariat, with support from the UN-Habitat Regional Office for Asia Pacific, on the Urban Low Emission Development Strategies project (Urban-LEDS II). Through the project, the city received support to develop Low Emission Development Strategies, greenhouse gas emission inventories, climate commitments, and to implement a variety of low emission development solutions. This was implemented through workshops, lectures, and hands-on activities to train city representatives and technical staff, identifying climate risks and assisting in the formulation of action strategies to be mainstreamed into local development plans.[36]

The project developed by ICLEI is complementary to ASUS. The project can build capacity within the city to develop and enforce masterplans, including in transportation. This will instil evidence-based decision making in the city, particularly in relation to the reduction of greenhouse gas emissions and embedding climate change adaptation and mitigation into urban development.

3.5. FINANCE AND FUNDING

3.5.1. City Budget Overview

3.5.1.1. Overview of National Regulations

In principle, local governments in Lao PDR have a higher level of authority over own-source revenues than other countries in the region. Sources controlled by local governments include fees charged on land use (land tax), land rental, assignment and transfer of land use rights, tax license issuance fee, revenue from natural resources such as sale of gravel, sand, soil, and laterite, and rental of State assets such as buildings, land and other assets. Only a small portion of revenue is transferred back to the central government, including turnover tax or value-added tax and minimum tax from domestic production of goods, and profits tax.[37]

Local budget expenditures include administrative expenditures of State organisations, of the Lao Front for National Construction, and mass organisations at the local level; local level defence and security expenditures; expenditures of the State Funds; expenditures of the administrative-technical agencies; capital expenditures including infrastructure construction, and other local reserve expenditures.[38]

In cases where local budget revenues and the apportioned revenues are insufficient to cover expenditures, the central budget will provide support to local administrations. The central budget can also provide support to local budgets to enable the execution of investment programmes and projects assigned in the annual master plan, or to deal with emergencies and urgent situations not included in the annual budget plan of the localities, based on the decision of the government.[39]

3.5.1.2. Revenues

The recent concluding report on the implementation of the Socio-Economic Development Plan (2015-2019) for Kaysone Phomvihane emphasises the need to exploit all sources of revenue within the city to meet necessary expenditures by managing and encouraging businesses to comply with regulations and obligations.[40]

In 2019, the city was able to pay all its debt. Over the past five years, the budget revenue equalled 101.59 billion Kip annually (USD 10.9 million), equivalent to 83.62% of planned revenue. 98.15 billion Kip, or 96.61% of total revenue, came from taxes, while 3.44 billion Kip, or 3.39% of the total revenue, came from rental of state property. [41]

The concluding report on the implementation of the 2015-2019 Socio-Economic Development Plan also highlights that revenue collection is not as strict and rigorous as it should be. [42]

3.5.1.3. Expenditures

		2018		2019		2020	
No.	**Revenue items**	**Plan**	**Achievement**	**Plan**	**Achievement**	**Plan**	**Achievement**
1	Revenue from tax	21,187,000,000	16,506,472,226	20,108,000,000	16,742,978,763	20,174,300,000	16,371,236,965
2	Revenue from state property	1,557,824,000	773,573,808	895,000,000	782,665,914	815,000,000	645,039,395
	Total	**22,744,824,000**	**17,280,046,034**	**21,003,000,000**	**17,525,644,677**	**20,989,300,000**	**17,016,276,360**

Fig. 14. Revenue items planned and achieved for the years 2018, 2019 and 2020 (in Kip. 1 Laotian Kip equals 0.00011 United States Dollar. 1 United States Dollar equals 9394 Laotian Kip, as of 19 March 2021)

		2018		2019		2020	
No.	**Expenditure items**	**Plan**	**Achievement**	**Plan**	**Achievement**	**Plan**	**Achievement**
1	Salary	7,675,470,000	7,358,850,936	0	0	0	
2	Bonus	810,000,000	797,501,640	1,590,363,000	1,811,281,101	1,839,000,000	1,703,854,832
3	State administration	815,000,000	814,100,000	1,086,000,000	1,085,640,000	1,086,000,000	1,086,000,000
4	Supporting (technical)	-	726,992,493	675,000,000	668,903,000	680,300,000	570,546,000
	Supporting	590,000,000	589,991,002	737,000,000	545,591,135	456,300,000	456,300,000
5	Others	100,000,000	100,000,000	100,000,000	100,000,000	140,000,000	140,000,000
6	State property purchasing	-	-	-	0	15,000,000	15,000,000
	Total	9,990,470,000	10,387,436,071	4,188,373,000	4,211,415,236	4,216,600,000	3,971,700,832

Fig. 15. Expenditure items planned and achieved for the years 2018, 2019 and 2020

The report on the implementation of the 2015-2019 five-year Socio-Economic Development Plan emphasises the need to focus on improving the living standards of workers in the city.[43] This includes salaries, allowances, pensions and other administrative expenses. The total expenditures of the city in 2019 was 54.29 billion Kip (USD 5.8 million), including 35.66 billion Kip on salaries, 6.7 billion Kip on allowances, 6.19 billion on administration allowance, 4.55 billion Kip on adjustments, 0.10 million on other payments and 0.5 million Kip on purchase of property. The report does not state any expenditures for education and health, or the involvement of the city in funding local projects. [44] It is also not clear how the remaining revenue is used, or whether it is redirected to the central government.

3.5.2. Existing and Projected Budget Allocations for the Area of the Intervention

Over the past five years (2015-2019), the city has invested in socio-economic development through 7 programs. Investment has been noted to be more effective than in previous five-year periods, focusing on construction of commodity production infrastructure, human resource development, strengthened leadership of the political party, public administration and technical capacity, as well as national defence and security work. [45]

168 urban improvement projects were implemented in Kaysone (in the period from 2015-2019), valued at a collective total of 1,763.11 billion Kip (USD 189 million). Of these projects, the majority are funded through banking and community loans (51.62%), followed by foreign and direct private investment (35.47%). Official Development Assistance grants only contributed to 8.88% of the projects, while public investment has the lowest contribution to development projects of 4.03%.[46] 70.36% of the projects are associated with the economic sector, 17.78% with the socio-cultural sector, and 11.86% to other administrative areas. [47]

The new Socio-Economic Development Plan for 2020-2024 indicates that 54 projects are in the pipeline, worth a collective total of 738.44 billion Kip. [48] While the total investment amount is less that that of the previous period, this can be attributed to a shorter foresight period for upcoming activities. However, comparing the percentages, the distribution of funding sources is similar, with most projects funded by banking and community loans, followed by Foreign and Direct Private Investment, with Official Development Assistance grants and public investments contributing the smallest proportions.

The recent report on the implementation of the Socio-Economic Development Plan for the period 2015-2019 highlights many costed projects and urban activities. The city has spent 960 million Kip on the protection and management of parks, clearing roads at a cost of 1.15 billion Kip, cleaning and repairing drainage ditches at a cost of 1.32 billion Kip, repair and paving of roads at a cost of 1.23 billion Kip, conservation and development of the old town at 2.68 billion Kip, and building a park at 23.2 billion Kip.[49] It is assumed that all these activities were undertaken over the five-year period, however data on the funding sources for these projects was not available at the time of writing, making it difficult to assess possible funding opportunities for the project proposed under the ASEAN Sustainable Urbanisation Strategy via comparison.

3.5.3. Borrowing Capacity

Source	Total 2014-2019 (billion kip)	Percentage	Total 2020-2024 (billion kip)	Percentage
Banking and community loans	910.03	51.62%	431.04	58.37%
Foreign and Direct Investment	625.43	35.47%	250.00	33.85%
Official Development Assistance Grants	156.5	8.88%	52.40	7.09%
Public investment	71.16	4.03%	5	0.6%
Total	1,763.11	100%	738.44	100%

Fig. 16. Expenditures of Kaysone based on the Socio-Economic Development Plans

Borrowing is used as a source of finance for investments by local governments at a rate of interest. Domestic and foreign source borrowing is largely centralised in annual State budget plans and recorded in the National Treasury's accounting system. Borrowings are processed through a one-stop service at the national level in the Ministry of Finance acting as the secretariat to the government in the management and use of debt finance. The Ministry of Finance should assess principal and interest repayment capacity in order to report to the government on submission to the National Assembly for consideration and approval. [50]

The State and other concerned organisations at the central and local levels are authorised to communicate diretly and negotiate with foreign donors regarding grants related to projects, with the participation of the finance sector. As described earlier in section 3.5.2 35.47% of Kaysone's funding for development projects in the previous period came from foreign and direct investment and 8.88% from Official Development Assistance grants, highlighting the city's heavy reliance and engagement with foreign donors and partners.

3.5.4. Possible Revenue Generation and Financing Mechanisms to be Applied in the Project

Successive National Socio-Economic Development Plans have identified the private sector as the main engine of growth, which has been further supported by a new public-private partnership (PPP) policy that supports procurement for public infrastructure and services, bridging the infrastructure gap and improving performance. As such, they are to be considered as primary tools to address general policy objectives, such as:

- Improving transport and communication across the country;
- Upgrading energy production, transmission and distribution facilities;
- Enhancing delivery of water provision, waste collection and other urban services;
- Broadening access to basic health and education services; and
- Facilitating economic development in remote areas of the country's territory.[51]

It is envisioned that each government agency is responsible for initiating, developing, approving, tendering, negotiating, signing and monitoring PPP projects falling under its mandate. A specialised PPP Unit within the Ministry of Planning and Investments acts as a public PPP Development and Knowledge centre to support government agencies in specific stages of implementation. The Ministry of Finance approves PPP projects in view of affordability and long-term impact on public finances. As such policies are still quite recent, the capacity of government agency staff to assess, develop, structure, tender, negotiate and monitor projects remains low, hindering the utilisation potential of PPPs. [52] Data from PPP Knowledge Lab identifies that the country had a total of 34 PPP projects overall, with a total investment of USD 23,658 million. One project dates back to 1996, while the others are more recent, occurring between 2010 and 20019. Most of the projects are in the electricity sector, with only one on railways (Lao PDR-China Railway).[53] The city has indicated that they are involved in further PPPs, however, further information is required to apply lessons learned to future projects.

4. Sectoral Analysis

4.1. ECONOMY

4.1.1. East-West Economic Corridor (EWEC)

The East-West Economic Corridor is 1450 km long, stretching from Da Nang, Vietnam to Mawlamyine, Myanmar, crossing through the Savannakhet province in Lao PDR and Mukdahan and Phisanulok in Thailand. The corridor has been completed, with the exception of the sections inside Myanmar.

To support economic activities along the corridor, special economic zones such as the Savan-Seno Economic Zone (SSEZ) located in Savannakhet province have been established, with one of the four sites approximately 2 km north of the centre of Kaysone.[54] The SSEZ is a hub for trade and services within the Greater Mekong Sub-region, supporting trade with nearby countries through the Second Friendship Bridge across the Mekong River and the Savannakhet International Airport. The map below indicates the location of three SEZ sites in relation to the urban centre of Kaysone, as well as important transport nodes that heavily impact the city. The government has invested USD 7.3 million to establish office facilities within these sites, and for resettlement and compensation.[55] The sites are already constructed and well established; Infrastructure in Savan Park (Zone C) has been established and many companies have already set up warehouses. Dormitories have been constructed in Zone D, providing 95 rooms per block.[56]

While the sites are more than 8 km away from the city centre, Kaysone is the nearest urban centre. Local employment and job opportunities are expected to increase over the next two decades with the anticipated increase in the number of industry locators, improving socio-economic developing in the city and neighbouring urban areas.[57] However, ensuring that the local community benefits from the increased growth and job opportunities as an outcome of the SSEZ is crucial to address social inclusion and prevent marginalisation; issues relating to land ownership and rights as well as low wages have surfaced in relation to the presence of the SSEZ.[58]

Recent plans indicate that access to facilities and basic services will be improved as a result of the development of SSEZ, with upgraded electricity supply, construction of a water treatment plant, and the upgrading of internet access to 4G within the city. A kindergarten, primary and secondary schools, as well as recreational facilities, are planned to be constructed in Savannakhet province to cater for families working in SSEZ, however further details on locations are not yet available.[59]

Various investors have established enterprises within the SSEZ sites, as demonstrated in Figure 17, below. Most of the establishments are owned by local investors, followed by Malaysian, Hong Kong, Japanese, Dutch, among others. Most of the industries present in the SSEZ relate to vehicles (vehicle and motorcycle assembly and import of second-hand vehicles), among others such as garments, diamond cutting, concrete and freight. While this requires further

Fig. 17. The East-West Economic Corridor, passing through Kaysone and Savannakhet province.[105]

analysis and investments, the presence of a large number of vehicle-related establishments could ease the purchase and use of private vehicles in Kaysone.

4.1.2. Major Economic Activities in the City

Savannakhet province is an economic powerhouse for Lao PDR; its economy grew at an average of 10.5%during the period 2006-2010.[60] Kaysone city in particular, has emerged as the focal point for development of secondary and tertiary industries established within the province. Based on GDP figures between 2007 and 2012, the average economic growth has been gradually increasing from 9.41% in 2007-2008 to 10.89% in 2013-2014.[61] Per capita GDP increased from $712 in 2006 to $1,027 in 2010, and from $1,464 in 2014 to $2,041 in 2017 (compared to national per capita GDP of $1,706)[62].[63]

The service, industry and commercial sectors are major sources of employment for local inhabitants in addition to governmental institutions. The service sector has reduced its share of GDP from 46.6% in 2010 to 45.6% in 2014, while the industry-commerce-handicraft sector has increased its share of GDP from 32.9% in 2010 to 35.1% in 2014. The tertiary sector of

Investor Nationality	Industry/enterprise	Number of enterprises
Lao PDR	Vehicle assembly; concrete; freight	8
Malaysia	Motorcycle assembly	3
Hong Kong	Garment	2
Japan	Vehicles, tin smelting	2
Holland	Small parts manufacture (Boeing)	2
South Korea	Vehicle assembly	1
Thailand	Import-export goods	1
Belgium	Diamond cutting	1
France	Concrete processing	1
Australia	Import equipment/ material for gold mining	1
Joint Venture Lao/ Malaysia	Import second-hand vehicles	1

Fig. 19. Investors and industries present in SSEZ.

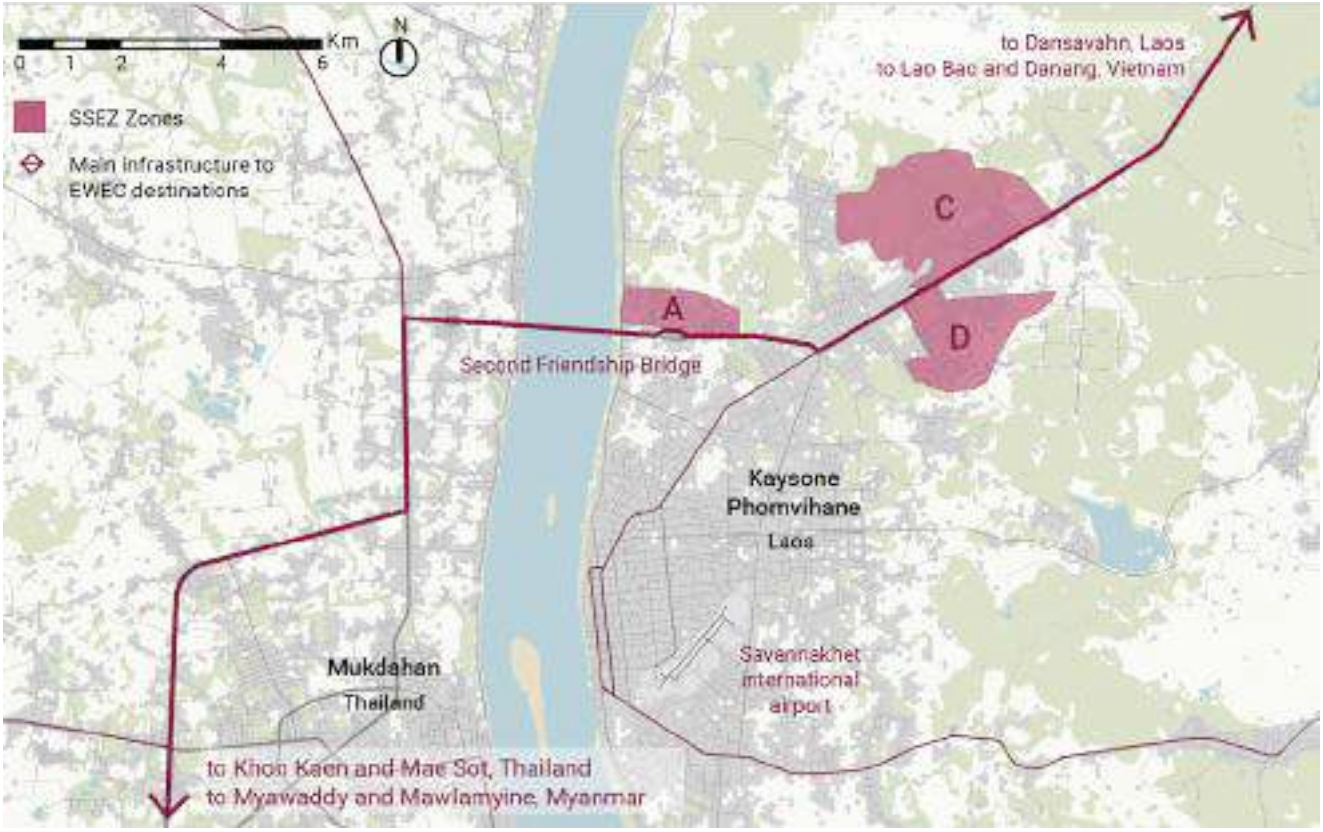


Fig. 18. Location of key transport infrastructure impacting Kaysone along the EWEC, as well as SSEZ's zones

Sector	Year							
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14
GDP growth rate (%)	-	9.41	9.68	9.75	9.82	9.97	10.85	10.89
Agriculture-Forestry (%)	20.9	20.9	20.7	20.5	20.3	20.0	19.6	19.1
Industry-Commerce-Handicraft (%)	30.8	31.2	31.8	32.3	32.9	33.4	34.3	35.1
Service (%)	48.2	47.8	47.4	47.0	46.6	46.7	46.1	45.6
GDP per capita (US$)	712	870	945	1,027	1,116	1,215	1,333	1,464

Fig. 20. GDP growth rate between 2006 and 2014. Source:2009 Statistics Survey, Planning Office, Kaysone Phomvihane[106]

agriculture-forestry has seen a gradual decrease in activity, with a share of 20.3% of GDP in 2010 dropping to 19.1% in 2014. [64]

The economy is targeted to grow at a higher rate of 11-12% in the next five years. Of this growth, the agriculture and forestry sectors account for 13.4%, industry and trade sectors for 58.73% and the service sector 27.87%. While the economy of Kaysone City and neighbouring areas have exhibited an increase in GDP, the capacity to exploit and leverage the potential of the city for development can be improved; the majority of production still depends largely on natural resources. Commodity production is not yet utilised within the city.

The industry-commerce-handicraft sector has expanded over the past five years, with 543 processing and handicraft factories throughout the city. Activities under this sector include pottery, bamboo weaving, weaving, painting, sculpture, pottery, blacksmiths, the products of which are sold in shops within the city that cater to the needs of domestic and foreign tourists.

4.1.2.1. Tourism

Numbers of hotels, lodging houses and restaurants are increasing to accommodate the growing number of visitors and tourists. This can be attributed to the completion of the Second Friendship Bridge in December 2006, which enabled easy access to touristic sites in Lao PDR and Vietnam by Thai tourists. However, the city's tourism potential is key to support further economic growth, with particular reference to the historical town and location along the Mekong River.

4.1.2.2. Decline of Agriculture

A decline in agriculture as a key sector for economic growth has been observed country-wide, with issues relating to governmental policy and resultant rural-urban migration. Farmers and public institutions are more orientated towards subsistence-agriculture than

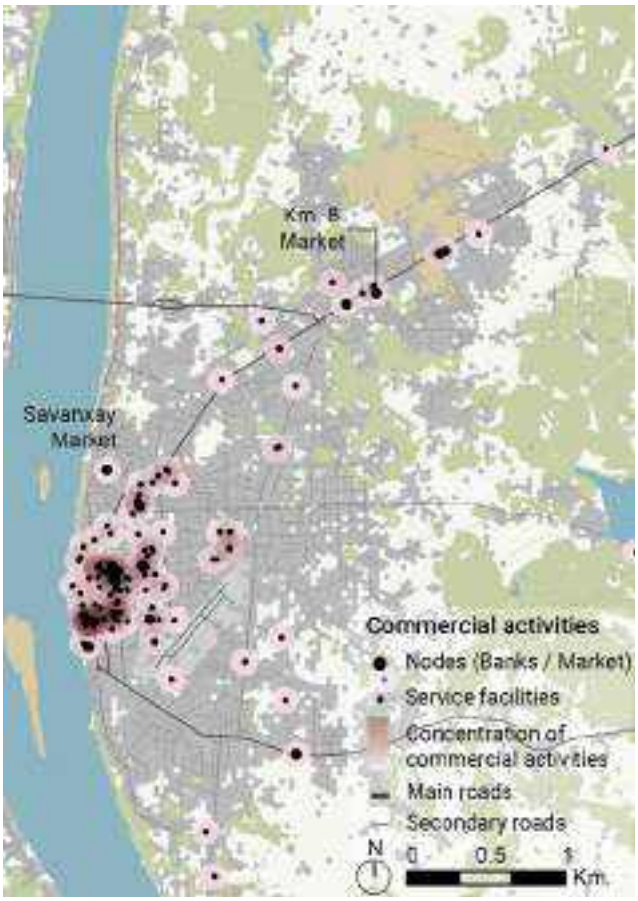


Fig. 21. Concentration of commercial activities in Kaysone

promoting a market-oriented industrial - agricultural sector. This is further evidenced by a lack of markets in Savannakhet province; the map below demonstrates that a very small number of villages and towns within the province have local markets. This increases demand on the limited number of existing markets, which causes harm to perishable food items that require transportation from farms to non-local markets, before being sold to consumers.

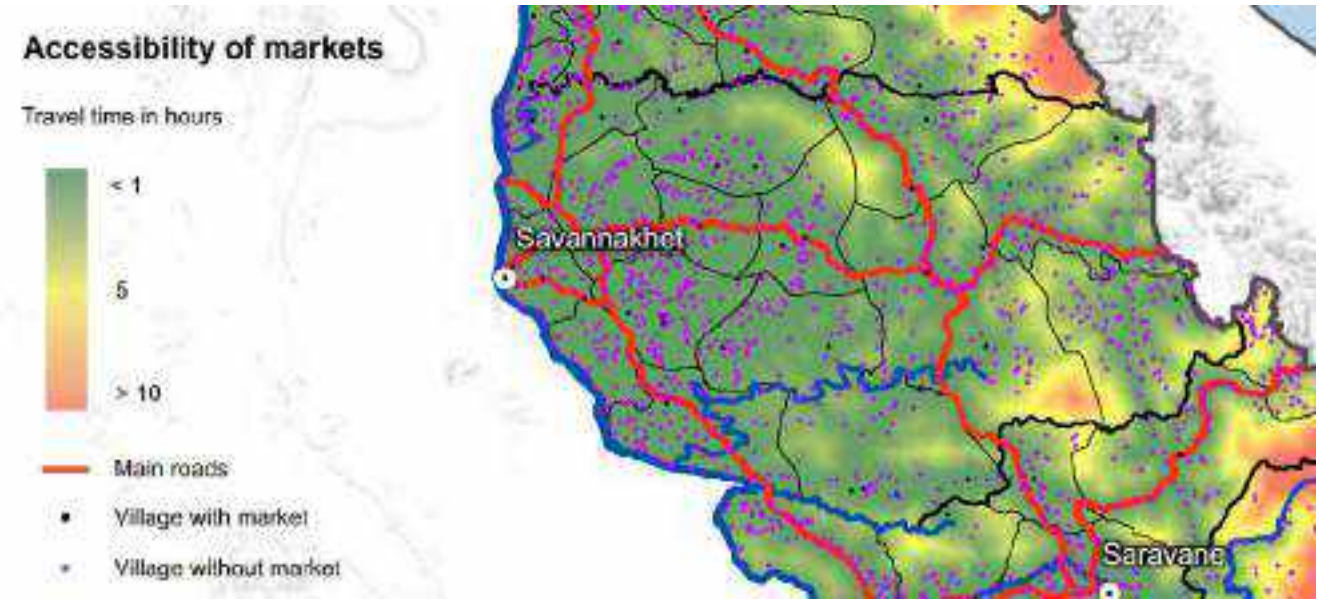


Fig. 22. Accessibility of markets within Savannakhet province.[107]

Rice is still the predominant agricultural product, followed by rubber and eucalyptus. In 2019, the city was able to produce a total of 51,605.85 tonnes of rice. Compared to 2014, the city has experienced a decrease of 11.12% in the total rice harvest area. The city has a total planned area of 1,244.3 hectares for agriculture that is used to grow leafy vegetables, long beans, eggplants, watermelon, papaya, soybeans, sweetcorn, cassava and peanuts in both the dry and rainy seasons. Livestock is also bred in the city, the majority of which are cows, buffaloes and goats. The production of meat, fish and eggs in the city is intended to ensure self-sufficiency.

To date, the city has 8 permanent markets, 1 shopping centre, 14 convenience stores, small markets and 4 flea markets. The city is planning to build three community markets in the nearby villages of Phonesim village, Ban Sok and Phakka village, which will increase access to locally produced goods and commodities. The city has 2,185 enterprise units with a registered capital of 748.29 billion Kip (USD 80.55 million); of these units, the province manages 1,551, and the city manages 634.

4.1.2.3. Employment

A report by the World Bank on poverty rates in Lao PDR reveals that the employment rate for Kaysone City is currently 66.5%.[65] This is one of the lowest rates in the country, compared to an average of 81.6% in Savannakhet province and 68.8% in Vientiane capital. Approximately 61.8% of the workforce is self-employed and 37.9% are engaged in non-agricultural related sectors, such as commerce and services.

4.1.3. Opportunities for Project Design to Contribute to Local Economy

While further studies are required to assess how the SSEZ impacts the local economy in further detail, the presence of enterprises related to the automobile industry could provide incentives and enable the purchase of private vehicles in Kaysone City. As such, improvements to public transportation and mobility within the city is essential to keep pace with upcoming developments. Currently, employees working in factories usually use shuttle services provided by their employers to commute to their workplaces on time. The project would expand connectivity beyond the workplace, increasing linkages between urban and rural areas.

According to the Socio-Economic Development Plan (2020-2024), the city intends to increase the GDP by 11-12% by 2024. The city also aims to increase agricultural production and the value of products of the processing industry. Planed investment in technology and handicraft sector is intended to increase competitiveness within the region and modernise production. Such investments will be incorporated with the proposed project under the ASEAN Sustainable Urbanisation Strategy; upgrades to develop a transport system in Kaysone will increase the city's attractiveness to developers and workers for investment. Increased accessibility is expected between places of residence and work, promoting a higher quality of life and increasing efficiency. This is critical for workers in the agriculture and handicraft sectors, who often commute between the city centre, marketplaces and agricultural fields in rural areas. The location of SSEZ and Mukdahan across the bridge, can promote the city to a regional hub for industry.

4.2. LAND USE AND HOUSING

The development of the town began in the area facing the Mekong River, followed by expansion to the east and north. The province and urban core were developed as a significant administrative and commercial centre of Southern Lao PDR during the French era in the 19th century. The centre of Kaysone city was built during the French colonial period, and is characterised heritage architecture and thriving trade and commercial activities.

Adjacent to the old city centre is the core business district, which contains banks, shops, hotels and restaurants. Along the Mekong River, are located a number of hotels, small restaurants and eateries, and makeshift recreational facilities that are erected seasonally and during occasions such as the traditional boat racing festivals. The city has two public parks in the town: one provincial government complex featuring a statue of the former president Kaysone Phomvihane, a small museum and trees. The other park is located next to an old sport stadium on the bank of the Mekong River.

Land prices within the city are affordable, and the majority of land is registered. However, there still exists unregistered land within the city and relevant entities have been working to encourage registration to achieve 100% land registration.

The land-use plan of Kaysone Phomvihane 1999, organises the city into several zones; The historical town conservation area where development began near the waterfront is visualised below in lilac. To the east lies an urban central area (red), which is surrounded by an urban inner area (orange). The industrial area is located further north of the city, corresponding to the current location of the SSEZ (purple). An urban expansion area (blue) and suburbs (pink) connect the industrial area to the urban central area. The dominant land use in the urbanised area is residential (64%). However, these residential areas are often mixed-use and include shops, restaurants and small-scale industries, often located on the ground floor, with residential units arranged over the upper floors.

A study developed by JICA in 2010 aimed at formulating basic development strategies of Kaysone Phomvihane. The survey team studied the development direction of

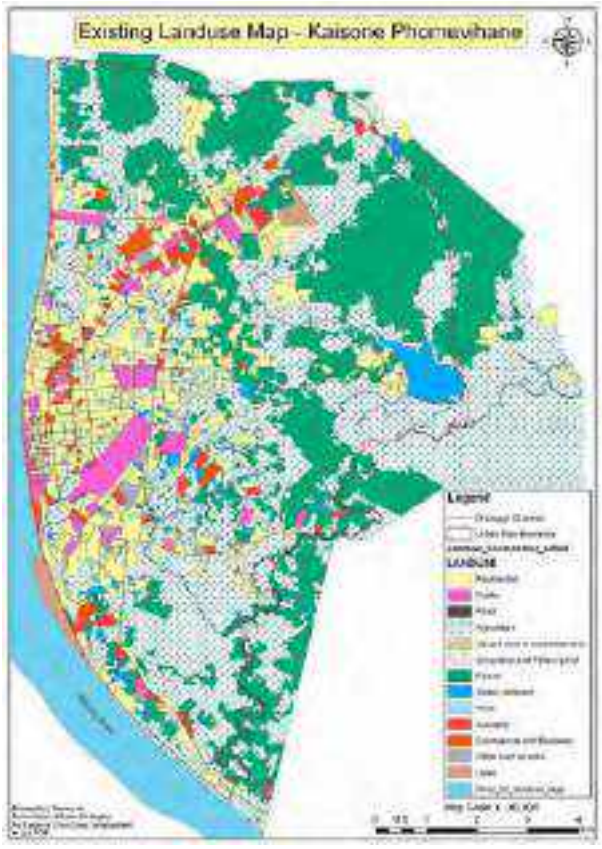


Fig. 23. Land Use Plan, part of the Kaysone Phomvihance City Master Plan 1999.

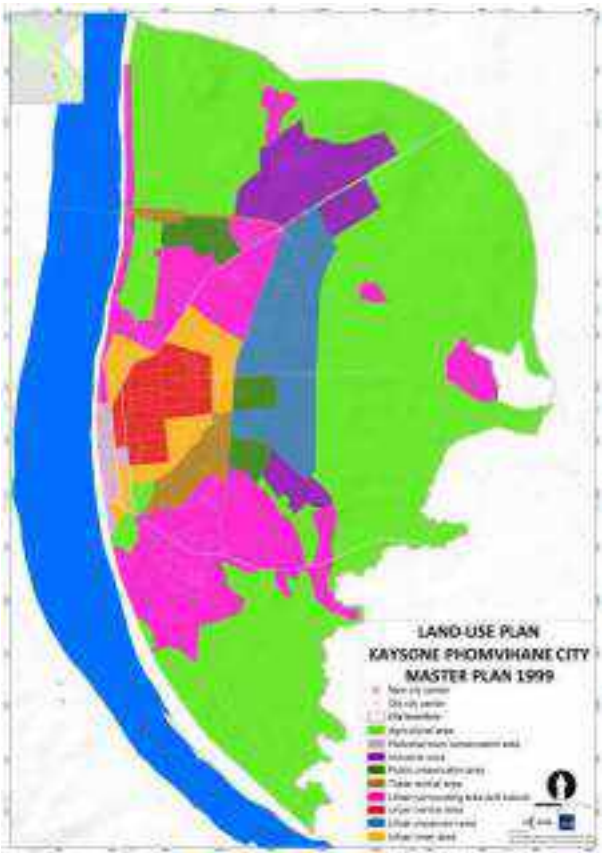


Fig. 24. Land Use Plan, part of the Kaysone Phomvihance City Master Plan 1999.

the city by comparing two cases: expanding existing city centre and creating a new city centre. The urban structure plan, illustrated in figure 25 designates the future focus of urban functional centres. The location of each centre is determined in relation to development density and land use categories, taking into consideration the current direction of economic development, position on the transport axis, geographical and environmental conditions.66 Functional centres are designated as follows:

- Old City Centre: located near the Mekong River, the old city has the potential to attract citizens and tourists. Buildings and streets in this area should be repaired and constructed based on regulations specific to a historical and cultural area.
- Commercial Centre: due to the location of the bridge and SSEZ northeast of the city, this area is projected to expand to the northeast. The area at the intersection of the Mekong Bridge and the SSEZ has been recommended for development as a New Commercial Centre.
- Industrial Centre: The area close to Zone C of SSEZ, has been designated to remain as the core industrial centre for Kaysone.
- Development of Administration Centre: Savannakhet Provincial and other governmental administrative offices are situated at the centre of the Kaysone urban area. This area can be advanced as an Administration Centre for the city and the province.
- Transport Centre: An international and inter-provincial bus station is locate in the urbanised area. The report identifies that the bus station will become an obstruction to the future development of the urban centre. Therefore, the transportation centre should be relocated to the outskirts of the future urban area, along the national highway.
- Education Centre: A teacher's college is situated west of Zone D of SSEZ, and future plans indicate that Savannakhet National University will be relocated to this region, consolidating it as an education centre.
- Park and Green Recreational/Tourism Centre: The plan identifies the current location of Lake Va as a recreational centre for the city. This area can be further developed as a Park and Green, Recreational/Tourism Centre. [67]

Based on a study conducted by JICA on land-use in the built-up area, a large portion of land around the city's area is composed of agricultural fields and forests. The built-up area is largely composed of residential lots, connected by roads.

The United Nations Population Fund (UNFPA), estimated in 2015 the population size of Kaysone town at 126,411 and the total number of households at 21,132 with an average household size of 5.9.[68] JICA's report estimates that the number of households will increase by 2.3 times compared to 2005. The majority of residential buildings in the city are independent houses though a minimal number of apartment complexes are present in the city. As such, there is a necessity to prepare housing policies and financing systems for affordable low-cost housing to support low-income households. [69]

As both land use plans are now more than twenty years old, it is difficult to fully assess the current urban formation. However, comparing the two maps to current growth patterns, some observations can be made about the growth of the city over the past 20 years. While the city itself is not very dense, an initial spatial density assessment in the city reveals that the urban central area and the historic centre, particularly along the river, are the densest areas in the city. Only 11.2 hectares of Kaysone city has a population of higher than 150 people per hectare, which houses approximately 3,402

Fig. 25. Schematic diagram of the various nodes in the city.

	Area (ha)	Share of total area	Share of built up area
Residential	1,695	20.7%	64.4%
Commercial and Business	162	2.0%	6.2%
Industrial	141	1.7%	5.4%
Public Facility	358	4.4%	13.6%
Road	143	1.7%	5.4%
Others	133	1.6%	1.6%
Built Up Area	2,632	32.1%	100%
Agriculture	2,792	34.1%	
Forest	2,155	26.3%	
Grassland, Abandonment & Fallow Land	337	4.1%	
River and Water Surface	279	3.4%	
Total	8,107	100%	

Fig. 26. Land use areas in Kaysone City.[108]

persons, or 2.7% of the total population. The remaining areas of the city have a population lower than UN-Habitat's recommendation of 150 people per hectare, particularly in areas of spread toward the economic zone. Although further spatial assessments of the city are required, it can be deduced from initial observations that such the areas of the urban centre and historic centre are more compact, promoting walkability, access to social facilities, economic activities, markets and other essential needs. Furthermore, while growth along the river can be considered scenic, attractive, and promoting access to the Mekong Bridge leading to Thailand, such growth should be limited due to the area's high susceptibility to flooding.

The current structure of the city excluding the urban core, is not compact, which could be attributed to its recent growth from a small town, to a city. Density analysis reveals that the majority of the city has a density lower than 49 people per hectare. The more recent expansion of the city is transit-based, highlighting the importance of key infrastructure. This is further evidenced by JICA's more recent study outlining proposed development in the urban structure. Presence of reliable infrastructure that eases commuting and movement for employment in agriculture, could be considered as impact factors. With the increased trade and traffic volume, land use patterns have changed to accommodate residential and commercial demand and agricultural and forest areas were lost in the physical expansion of the city.

The urban expansion area identified in the masterplan has already become part and parcel of the city, according to the density analysis. The expansion urban area accounts for 37% of the total city size, extending the footprint to 3,760 hectares in 2012 from 2,758 hectares in 2005.[70] Further north around the identified SSEZs, a high density can be observed in relation to the dormitory and accommodation constructed for employees. This rapid urban population growth coupled with a spatial expansion of the town centre has generated complex environmental and social challenges, including poverty as a result of access to employment opportunities. With limited resources, local authorities are having difficulties addressing the growing demands for essential urban infrastructure and to respond to the requirements of an urbanising local economy.[71]

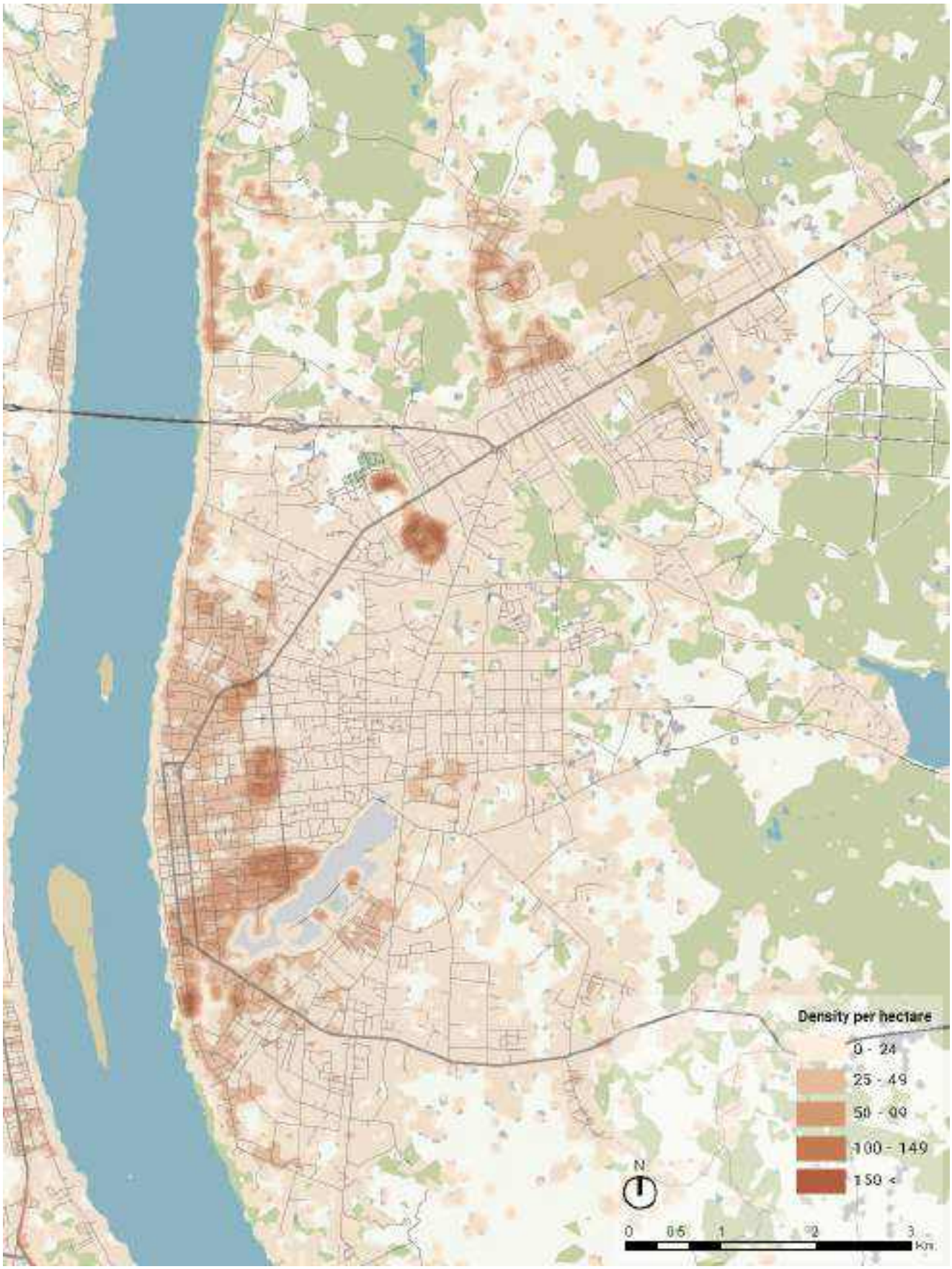


Fig. 27. Density analysis of Kaysone

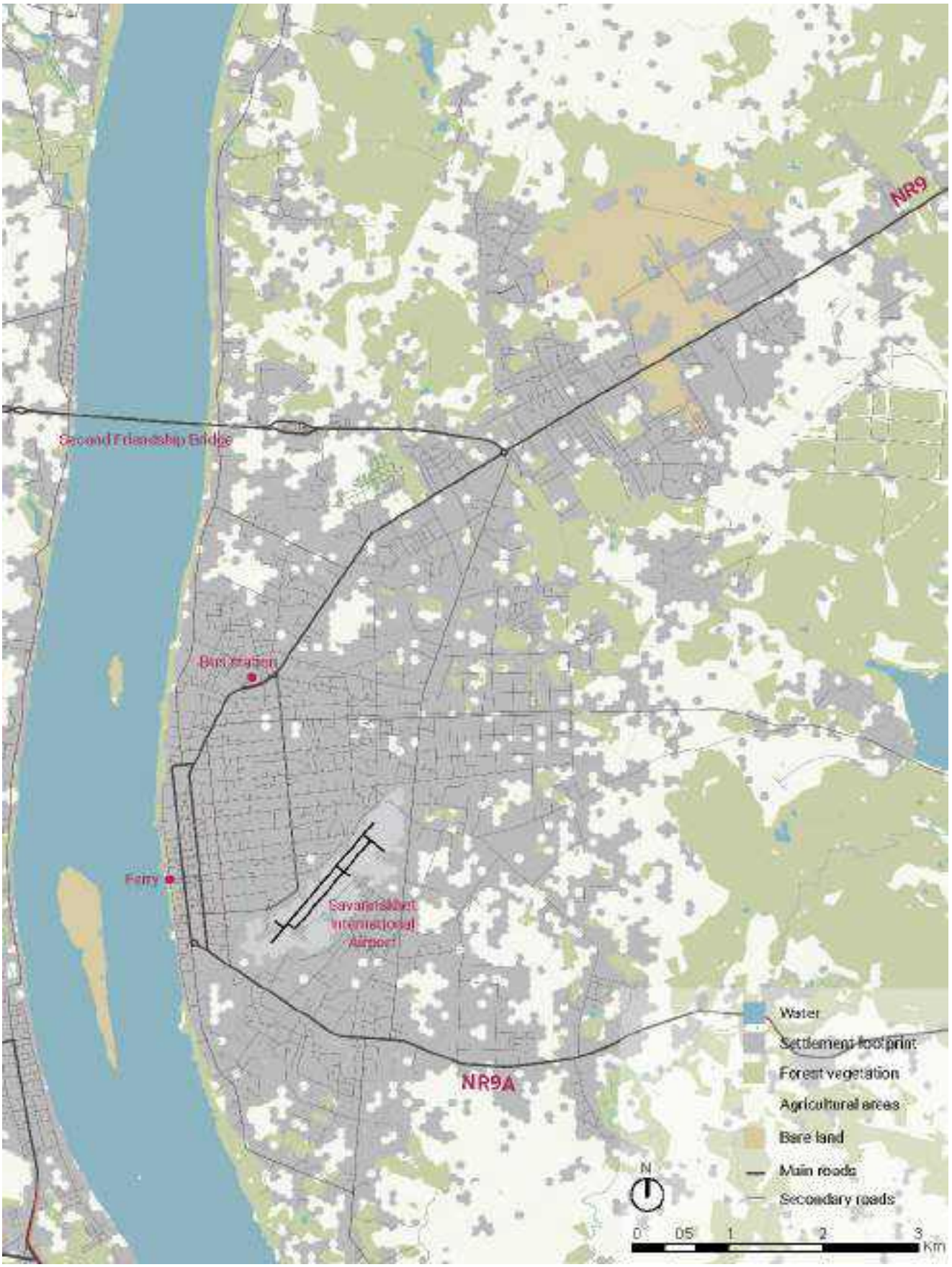


Fig. 28. Main roads in Kaysone

4.3. TRANSPORT AND MOBILITY

4.3.1. Overview

Kaysone is accessible by land, air, and water. The newly constructed Second Mekong River Friendship Bridge has provided easier access for freight, passenger and tour buses between Mukdahan, Thailand and Kaysone. The bus terminal in the town centre provides national and international services to other areas of Lao PDR and Thailand and Vietnam.[72] The city has an international airport with a 1,650m long runway that is located in the southern region of Kaysone Phomvihane, near the city centre, surrounded by residential development.[73] The airport has direct flights to Vientiane and Pakse, and Bangkok, Thailand.

Ferryboats connecting Kaysone to Mukdahan, Thailand operate five times a day. The port has an immigration and customs service in the terminal building, requiring Lao people to present a border pass to cross the Thai border.[74] It is not clear whether these boats are privately owned or managed under a central private or public organising body.

4.3.1.1. Roads

Two national roads pass through Kaysone. NR9, a national highway running east to west, connecting to Thailand, passes through a suburb of the urban area north of the urban centre. NR9A, also running east to west, runs through the southern portion of the urbanised area. However, there is no existing arterial road connecting the two trunk roads.[75]

The roads in the city total 685,985 metres in length, translating to 5.4m of roads per capita. This reveals not only inefficiency in the infrastructure networks in general but also supports the assessment of low urban population density in the city. While this calculation does not take into account key indicators of location and quality of road infrastructure, it provides a rough indicator for general network efficiency. Of these 685,985 metres of roads, only 3.5% are paved. This is much lower than the national average, in which only 28% of the road network is paved.[76]

The city has 17 bridges that have a combined length of 478.9 metres. Within the actual city centre, there are 223 roads with a length of 240,835m, 17 % of which are concrete, 22% are paved, and 60% are unpaved.[77] Significantly, this means that almost two third of the roads in the city are unpaved, impacting accessibility and connectivity of residents in the city and slowing down transportation. While lateral roads in the interior of the town are constructed with bitumen surfaces, the majority of interior roads have been constructed without drainage structures. Of those, a number are not properly connected to natural drainage canals and are frequently flooded.

The report on the implementation of the 5-year Socio-Economic Development Plan highlights the need to improve the cleanliness and attractiveness of the city. This requires park management, improving solid waste management, and construction of infrastructure. In 2019, the city upgraded and improved the quality of concrete roads totalling 1,405m with a cost of 36.97 billion Kip (USD 3.9 million) and 4,805m of paved roads, with a cost of 11.88 billion Kip (USD 1.29 million). For the period of 2020-2024, the city plans to upgrade 8 concrete roads, 10 asphalt roads, 9 unpaved roads, 3 concrete bridges, 4 steel bridges and 1 wooden bridge to ensure efficient transportation of goods and traffic flow within the city.[78]

To improve the transport sector in Kaysone city, the city office has cooperated with the provincial office for Public Work and Transport to design traffic lanes and roundabouts to reduce traffic congestion. The city has also sought to design and install traffic light systems to reduce congestion and risk of road accidents.

4.3.1.2. Vehicle Ownership

Based on a report released by the city in 2019, there are currently 89,007 vehicles in the city the majority of which are registered for personal and are comprised of motorcycles and cars. The city has approximately 200 tricycles, rickshaws/tuk-tuks and Skylab (local tricycles). Due to the presence of agricultural fields around the city, there are 71 registered tractors. The city has a large number of registered trucks of different sizes (ten-wheelers, six-wheelers, four-wheel large

Type	Amount
Motorcycle	19,734
Sedans/cars	4,023
Three-wheelers: Tuk-tuk/Rickshaws/ Skylab	190
Tractors	71
Ten-wheelers	255
Six-wheelers	365
Trucks	5,945
Pick-up trucks	4,322

Fig. 29. Vehicle ownership in Kaysone

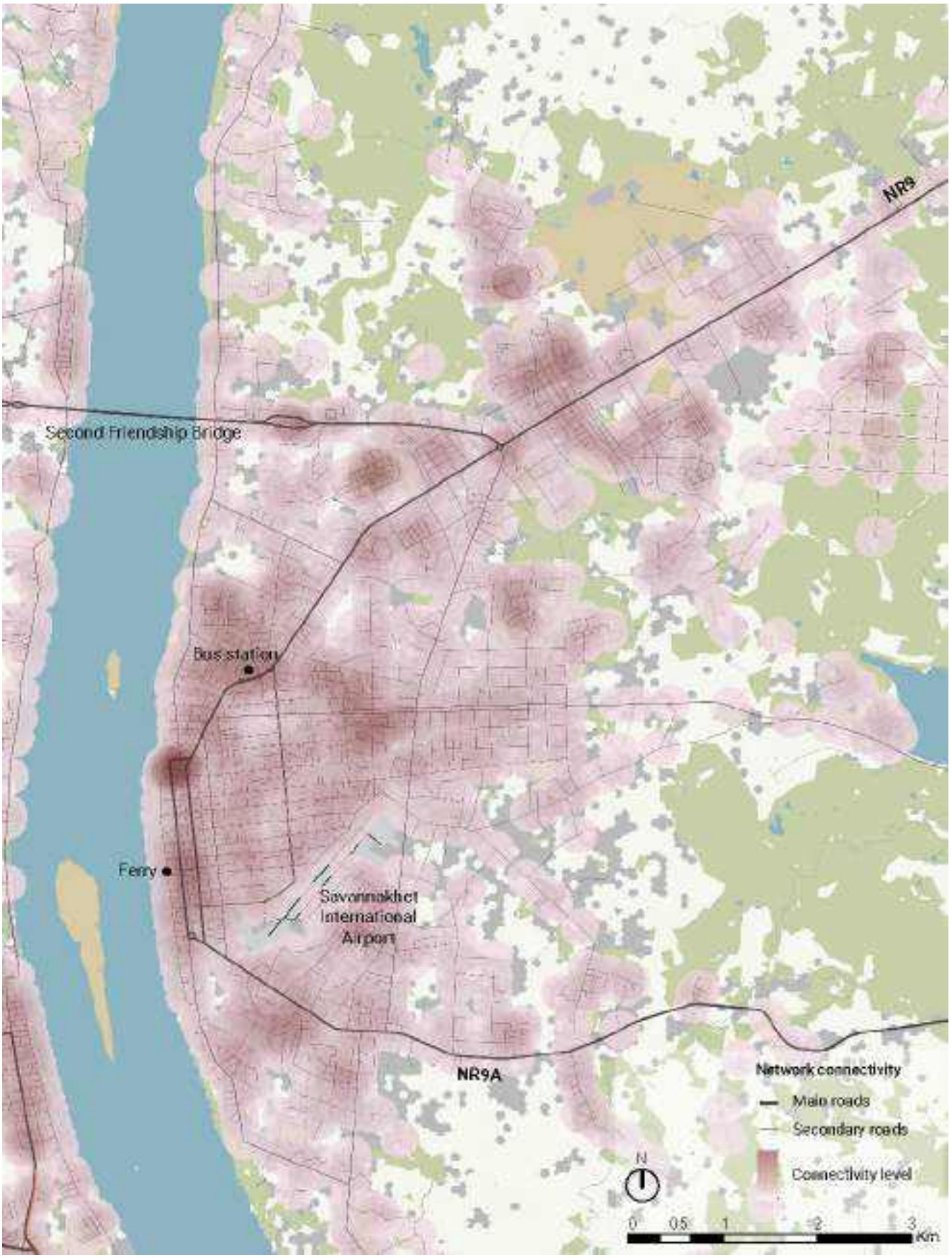


Fig. 30. Connectivity analysis of Kaysone, conducted using intersection density after classification of roads by type.

trucks, pick-up trucks), which can be attributed to the location of Kaysone along EWEC and the presence of SSEZ.[79]

4.3.1.3. Public Transport

There is limited formal urban public transport in Lao PDR. With the exception of the capital Vientiane, bus services operate as inter-urban. Kaysone currently lacks a public transportation service, including buses on a regular route. Tuk-tuks and minibuses operated by individuals, families, and private companies are the main means of transportation. These minibuses operate mostly as para transit with no fixed routes. Initial reports indicate that the private company (ITECC) plans to introduce 40 electric buses to Kaysone Phomvihane. The project was halted due to lack of funding for implementation, however 20 e-buses will be introduced as school buses to service the urban area. The fare is set at 2,000 Kip/ride (USD 0.22). These e-buses were imported from Shenzhen Marshell Green Power in China at a cost of 25,408 USD per bus and have a capacity of 23 passengers.

The proposed project will further assess the public transport situation in the city and develop a feasibility study to support further development of city's the transportation system. The project is envisioned as a strategy to develop and integrate various modes of transport in the city, building the system into a concolidated network.

4.3.1.4. Parking

Vehicle parking often takes place along roadsides. This disturbs traffic flow and could cause congestion, especially in the urban centre where roads are narrow and busy. With the predicted increase of vehicles and resultant traffic volume, it is recommended that a public parking strategy should be developed for the city, particularly in the urban and historical centres.

4.3.2. Social

The city's transport challenges include a rapid increase in private vehicles such as cars and motorcycles which leads to traffic congestion during peak hours and increased traffic accidents. The number of accidents have so far increased substantially in line with the rapid growth of the economy. At the provincial level, Savannakhet has the second-highest number of vehicle registrations, registering consistent growth. On average, the number of vehicles increased 20% per year during 2006-2010. This

Fig. 31. Kaysone City's streets. (Source: Shutterstock/ Anousith Sikhoth)

reveals an approximate growth in vehicle numbers of 1.9% with every 1% increase in the provincial GDP. The number of road accidents rose slightly from 327 in 2007 to 395 cases in 2009.

Most of the roads within the urban centre of the city have a sidewalk at one or both sides of the road. However, streetlights are still lacking, making it perceivably dangerous to walk at night.

The aforementioned connectivity issues directly impact social equality in terms of access to services and employment opportunities.

4.3.3. Economic

The city's strategic location along the East-West Economic Corridor and the presence of the nearby Special Economic Zones are potential drivers of growth in the transit and transport sectors. There was previously a cargo ferry port along the Mekong River that connected Kaysone to Mukdahan. However, operation of the ferryboat for cargo was abolished after the completion of the friendship bridge II in 2006.

There are various shuttle services operated by factories within the city to transport employees from their residences to places of work. These are privately owned and managed.

4.3.4. Environmental

As part of the Urban-LEDs II project, the city intends to undertake GHG inventory development in the future and integrate climate change adaptation, mitigation and an energy access plan. This will ensure that proposed public transport routes are environmentally less impactful with reduced GHG emissions. The provincial office of Natural Resources and Environment has conducted a study on emissions, air and noise pollution of the transport sector in the province that includes Kaysone City.

4.3.5. Regulatory

Urban Development and Administration Authority is responsible for the maintenance and repair of city infrastructure. Initial consultations with the city on urban transport revealed that the city has many plans under the Infrastructure Development Programme 2021-2024 that are related to construction and improvement of road quality, particularly in relation to road and bridge construction, pipeline and drainage construction, anti-landslide construction and emergency repairs. The Transport Unit under the Provincial Office of Public Works and Transport (PPWT) manage all bus operators in the province, which includes registration and licensing.

The provision of public transport is the responsibility of local governments. Neither the city nor the province Savannakhet have any concrete plans or policy frameworks for low-emission public transport development. This is further evidenced by JICA's report and initial consultations with the city. As such, the project's goal in developing a masterplan for transportation in the urban area will address this gap. The proposed project under the ASEAN will not only draft a City Sustainable Transport Master Plan but will also assess the current capacity gaps related to transport services (planning, management, maintenance) to ensure the project has long-term impact bolstered with improved technical capabilities. The project's proposed activities under outcome 3 propose the development of an implementation plan that includes a business model and monitoring framework to further support the implementation of the proposed project, ensuring capacity building at local and provincial levels.

The city does not currently have any transport plans but has initiated the development of a transport improvement strategy. This includes six areas:

- Improvement on transport vehicles and bus committee
- Improvement on parking stations for small-size buses
- Constructing a public transport office for the committee
- Constructing a parking stations for public buses in the urban areas
- Construction of stops along routes
- Management of public parking

4.4. BASIC SERVICES

The city has improved access to basic services since 2015, according to a World Bank Study: 92.7 % of the population has access to improved sanitation; 97% of the population has access to an improved water source; 87.2% are not using firewood as a source of heat for thermal comfort or cooking; 97.7% are using electricity; and 96.4% have access to a phone.

The city's topography is relatively flat and drainage capacity is fairly limited; The system consists of roadside drains and open channels where flood water flows through natural streams and creeks that lead to the Mekong river.

4.4.1. Solid Waste Management

Solid waste management in Kaysone involves the collection of garbage from residential areas to designated dumpsites located approximately 12km from the city. Collection is the responsibility of UDAA and private contractors and collections are disposed of at a dump site designed and constructed in 1998 by UNDP and NORAD funds. The collection coverage level is only 35%, with 4,300 households registered as customers by UDAA.

According to other development partners, there are currently no specific solid waste management regulations, policies or strategies at either national or local level, due to an overlap in mandates and legislative frameworks in the areas of environment, public health and urban infrastructures. It is therefore difficult to identify which agency is taking a lead role.

4.5. EDUCATION

Key socio-economic characteristics within Kaysone and Savannakhet follow trends of the country as a whole. Low-quality education and consistent dropout rates among girls have ranked Lao PDR as one of the lower performers in the East Asia Pacific region in girls' education. In Savannakhet province, only 24.7% of young people aged 14-17 are enrolled in school. Approximaetly 56% of women in Savannakhet province self-report as literate, compared to 71% of men.

Within the city, there are 40 kindergartens, 71 primary schools, 21 secondary schools and one university. Data from the Socio-Economic Atlas of Lao PDR reveals that the province itself is well distributed with schools, leaving only a small number of households without access to schools. Schools in Kaysone and surrounding areas are accessible to residents in one hour or less.

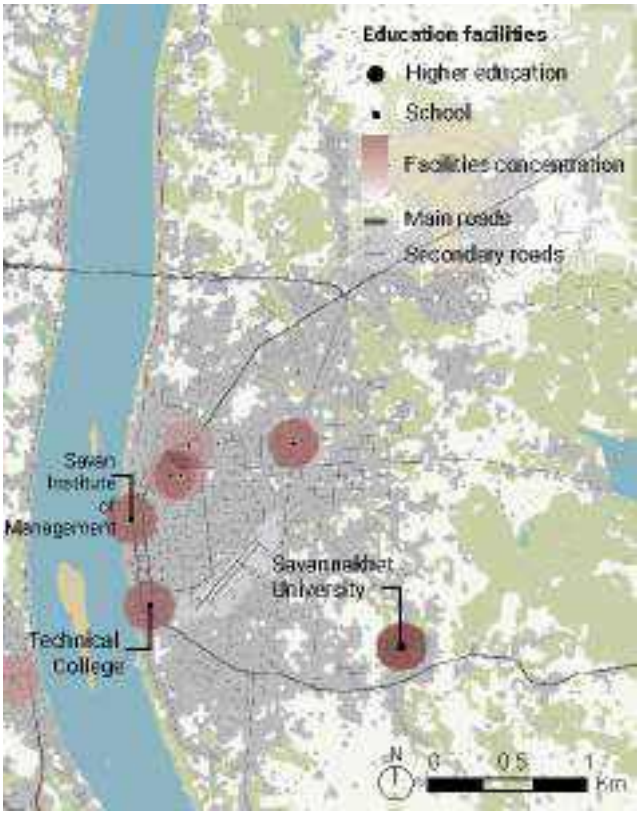


Fig. 32. Educational facilities in Kaysone

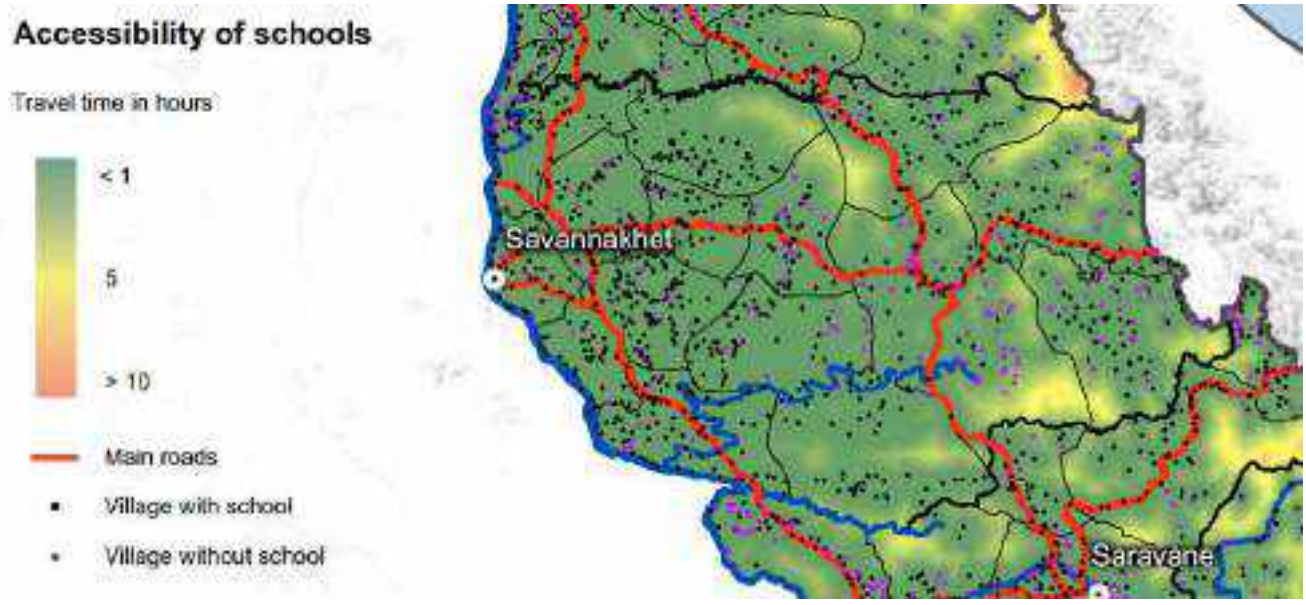


Fig. 33. Accessibility of schools.[109]

4.6. SAFETY AND SECURITY

4.6.1. Social

The country is ethnically diverse with 49 different ethnicities represented. There is a diversity of languages, cultures and lifestyles amongst the ethnic groups. 65% of the population practices Buddhism, 2% practices Christianity, and 31% stated they had no religion. 53% of the population is Lao by ethnicity as demonstrated in the chart adjacent. It is not clear how such groups are represented within the city but understanding such demographic factors is crucial to assess the social fabric in relation to the formation of the city. The map indicates that while the Western side of Savannakhet is of Lao ethnic background, the Eastern site is Katuic, a minority at national level, with Tai-Kadai distributed across the province. This indicates that socio-economic factors within the province could impact the demographic distribution of the city, noting its political and economic importance within the province.

In order to develop transport systems that are appropriate for all inhabitants of the city, it is crucial to consider the social formation of the city around the presence of vulnerable groups. Decree 192 in Kaysone describes vulnerable people as those engaged in the informal sector including casual and seasonal laborers, landless farmers, small vendors and street sellers, and those who have limited access to, or are unable to take advantage of urban economic opportunities. Vulnerable groups within the city also include single female-headed households. A report published by the World Bank indicates that there are 15,913 people in the city who classify as poor.

While crime is prevalent in some areas of the city, particularly in remote corners or dark spots, they are rare. Thus, Kaysone is classified as a "mostly safe city."

Fig. 34. Demographic breakdown of Lao PDR by ethnicity

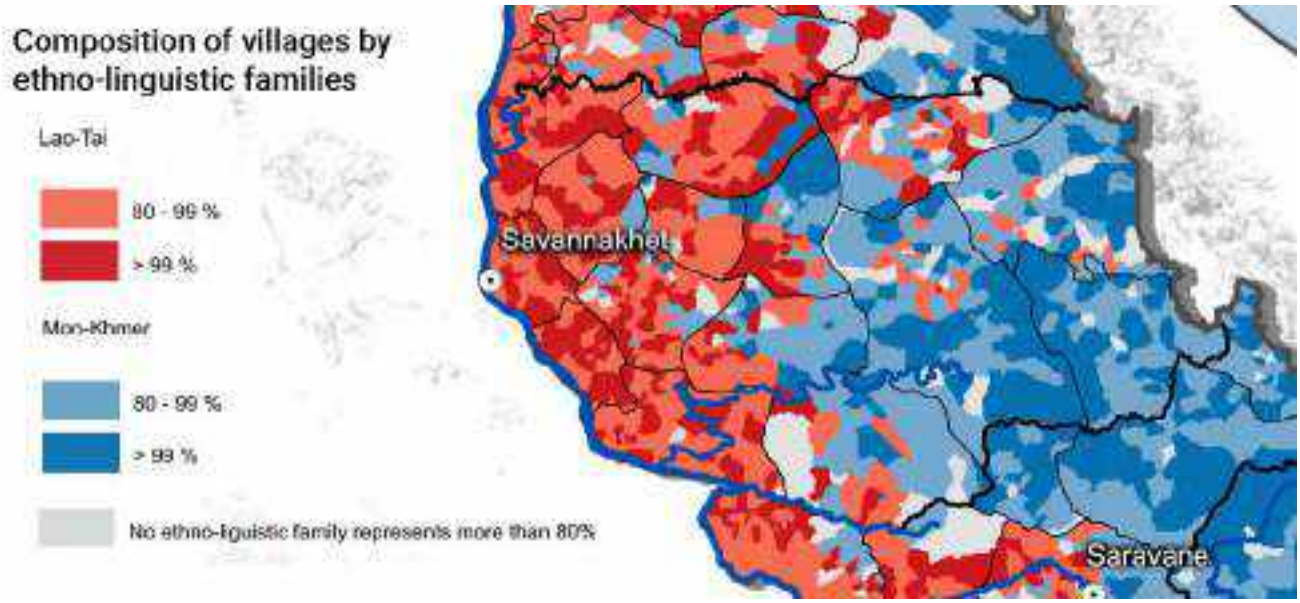


Fig. 35. Composition of villages by ethno-linguistic families

4.6.2. Environmental

4.6.2.1. Unexploded Ordnances (UXOs)

Unexploded ordnances (UXOs) are a major concern in Lao PDR; during the Second Indochina war (1964-1975) more than two million tonnes of bombs were dropped on the country. The presence of UXO can negatively affect the socioeconomic development of a country and increase costs of urban development projects through land clearance. However, in 2015, UXO clearance surveys were conducted in Kaysone by Soupha Engineering Consultant (SEC) which concluded that there is no need for UXO clearances in the district.

4.6.2.2. Extreme Weather

Lao PDR has been increasingly affected by extreme weather events; in 2012, the country was named the 7th most severely affected by climate change in the world. This vulnerability is attributed to physical geography, low coping capacity and reliance on the agriculture sector, and on changing environmental trends such as increased rainfall that leads to widespread flooding.

Major floods in the Mekong River have impacted the city, most notably in 1966, 1978 and in the years from 1995 to 1998. More recently, floods in 2005, 2008 and 2011 were exacerbated by non-functioning northern and southern flood gates and linked constrictions in the natural drainage channels. The 2011 tropical storm Nokten caused extensive damage and flooding in the city, affecting 318 households and 91% of rice fields. Another storm in 2013 destroyed infrastructure, houses and utilities, and electricity supply was down for more than one week. The estimated cost of damages was USD 220,493.[80]

A clear cause of flooding in Kaysone and the wider province is the insufficient capacity of the drainage channels. This is caused by a combination of design deficiencies and insufficient maintenance.

While the city experiences periods of increased precepitation, droughts also occur in both dry and wet seasons. Droughts have impacted the city on several occasions, the most recent of which occurred in 2010 and 2012. An extreme drought was recorded in 2007 in which the average Mekong surface water was recorded at 124.84m, below the minimum gauge of 125.02m. In 2010, the average Mekong surface water was recorded to be even lower, at 124.42m. [81]

Extreme temperature increase has been observed in Savannakhet province. The mean average annual temperature has increased by almost 1.4°C in the last 30 years. Annual average rainfall is 1531 millimetres per year with very small recorded increase over the dataset, the annual average now recorded at 4% higher than in 1989.[82] Data reveals that while rainfall has increased, the number of rainy days in comparison to 1989 decreased; Savannakhet now experiences 101 days of rain per year compared to 121 in 1989. An increase in rain volume over a reduced number of days, shows that rain occurrences are now more intense, leading to increased likelihood of flash floods as drainage systems can reach capacity faster without any dry periods in between to ease recovery.

This increased intensity in rainfall is also resulting in long, dry spells that could likely lead to increased droughts. Projected increases in flooding and droughts are expected to impact livelihoods, health, physical infrastructure and the economy.

Various climate change hotspots in the city via the impact of flooding have been identified. These areas are described in the table below.

Area name	Frequency (per year)	Mean Duration	Mean Depth	Sub-catchment	Increase in water quantity	Flood duration (months)	Mekong effect?
New market	3 times	7-20 days	50 cm	Huaykilamang	1.8	6-10	No
Huaylongkong	2 times	2-7 days	150 cm	Huaylongkong	4.7	6-10	Yes
Near migration station	2 times	1-2 days	100 cm	Huaylongkong	4.7	6-10	Yes
Huaykilamang	2 times	1-2 days	100 cm	Huaylongkong	4.2	6-10	Yes
Old Market	6-7 times	3 hours	50 cm	Huaylongkong	4.7	6-10	Yes
Administration School	2-4 times	1-2 days	20 - 40 cm	Huaykilamang	1.8	6-10	No

Fig. 36. Climate change hotspots in the city

5. Alignment to Global Standards & Impact

5.1. 2030 AGENDA AND THE NEW URBAN AGENDA

The Agenda 2030 for Sustainable Development constitutes a global plan of action for people, planet and prosperity, determined to take bold and transformative steps to shift the world onto a sustainable and resilient path. It establishes 17 Sustainable Development Goals (SDGs) and 169 targets which recognise that ensuring human rights, and ending poverty and other deprivations, must go hand-in-hand with strategies to improve health and education, gender equality and the empowerment of all women and girls, and tackle climate change issues. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.[83]

In addition to the Agenda 2030, the New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in 2016. It is an action-oriented document towards sustainable urban development at the local level, and contributes to the localisation of the SDGs in an integrated manner. Furthermore, the recently released New Urban Agenda Monitoring Framework (September 2020)[84], establishes a list of comparable indicators that aim to support local and central governments to report on progress in the NUA implementation.

As supported by the New Urban Agenda, the globally agreed Sustainable Development Goals are fundamentally relevant to local and city-level actors, as "Cities can be massive agents of positive change, if they are well-planned, built and governed". The SDGs have recognised the transformative power of urbanisation with a dedicated goal (SDG 11) focused on cities and human settlements. However, the role of urban actors extends to all 17 SDGs, meaning that local government achievements on urban targets will productively complement the entire SDG framework.[85] UN-Habitat Flagship Programme on "SDG Cities" indicates that: *"Sustainable cities and human settlements are key drivers for sustainable development; as widely documented, cities can work as a string that connects all other sustainable development goals together, since their density and economies of agglomeration link economy, energy, environment, science, technology and social and economic outcomes."*

Urgent action is required this decade to deliver the Goals by 2030. Key challenges remain in the translation of evidence-based policies and strategies into sustainably financed and effectively implemented urban integrated projects that make tangible multidimensional impact which can be properly measured.[86]

5.1.1. Local Context: Trends on achieving the SDGs

As indicated in the Sustainable Development Report 2020[87], countries in Asia have made the most progress towards the SDGs since the adoption of the goals in 2015. While the world as a whole has made progress on the SDGs, countries in East and South Asia in particular have progressed the most in terms of their SDG Index score.

The Asia and the Pacific SDG Progress Report published in 2021[88] highlighted that the Asia Pacific region must focus on accelerating progress towards the SDGs. While great progress has been made towards good health and well being (SDG 3) and industry, innovation and infrastructure (SDG 9), the region has alarmingly regressed on climate action (SDG 13) and life below water (SDG 14). The region needs to urgently improve on these 2 environmental goals, and it continues producing half of the global greenhouse gas emissions. The economic benefits from sustainable fisheries and the quality of the oceans have also declined.

Lao PDR was among the earliest countries to localise the Sustainable Development Goals (SDGs) and integrate them into its Eighth National Socio-Economic Development Plan (NSEDP) in 2016, with approximately 60% of the 160 NSEDP indicators linked to the SDGs[89]. Despite these efforts, the country has the lowest SDG Index country performance[90] of the ASEAN Member States, with 62.1 points (out of 100)[91]. In 2016 the Government of Lao PDR formally launched national SDG 18, 'Lives Safe from UXO' (unexploded ordnance), in the presence of the UN Secretary-General Ban Ki-moon. As UXO remains an issue affecting national development in multiple dimensions, Lao PDR's output under SDG18 contributes to outcomes under all the other SDGs.[92]

Fig. 37. Current Assessment, SDG Dashboard for Lao PDR

The "SDG Index and Dashboards" summarise countries' current performance and trends in relation to the 17 SDGs. It is not an official SDG monitoring tool but instead complements efforts of national statistical offices and international organisations to collect data on, and standardise SDG indicators. [93] Following the introduction of its national SDG Dashboard, Lao PDR reports positive progress in achieving SDGs 1 (no poverty), 6 (clean water and sanitation), 8 (decent work and economic growth), 11 (sustainable cities and communities) and 13 (climate action). However, major challenges remain for SDGs 2 (zero hunger), 3 (good health and well-being), 6 (clean water and sanitation), 9 (industry, innovation and infrastructure), 10 (reduced inequalities), 16 (peace, justice and strong institutions) and 17 (partnerships for the goals).[94]

Kaysone Phomvihane is making ongoing local efforts towards the SDGs implementation, as stated in its recently approved Socio-Economic Development Plan (2020-2024) which establishes the following as a core objective:
"Ensuring green and sustainable development (SDGs) with economic development at the center, ensuring harmony between economic development, socio-culture and environmental protection, as well as responding to natural disasters in a timely manner and addressing poverty and development issues"[95]

The plan addresses different areas for regional development (agriculture-forestry, industry and commerce, public works and transportation, natural resources and environment) and identifies 158 projects in 7 priority programs with an emphasis on:

- Food production
- Industrial development, including training and capacity development
- Environmental and development models for rural villages
- Road upgrading/repairing and basic infrastructure to protect against landslides
- City upgrades for drainage, traffic management, garbage service, and building of a bus terminal
- National defence and security

These efforts, if undertaken through a sustainable approach, could contribute to improved SDG indicators identified as critical, such as 2 (zero hunger) and 9 (industry, innovation, and infrastructure), and others that remained with significant challenges, such as 8 (decent work and economic growth) or 15 (life on land).

5.2. KEY SDGS RELATED TO MOBILITY: THEMATIC ALIGNMENT

The project envisaged for Kaysone, would address improvements in the city's mobility through the development of a plan. This would have positive impact on several SDGs, especially those related with sustainable cities and transport infrastructure such as SDGs 3, 9 and 11.

The table below illustrates relevant indexes that have been extracted from the "SDG Index" at the national level, providing useful reference on key goals and mobility ratings for Lao PDR. However, as the second-largest city in Lao PDR, Kaysone itself has a significant role in impacting key mobility indices, such as air quality or traffic accidents.

The index for air pollution is measured as the population-weighted mean annual concentration of particulate matter (PM2.5) for the urban population in a country, which is capable of penetrating deep into the respiratory tract and can cause severe health damage. In Kaysone, actions such as the promotion of public transport systems and reduction of car emissions would create a positive impact on SDG 11, and support improvements to the national performance on air quality related indicators.

Another relevant indicator for mobility is traffic deaths. In 2009, the province of Savannakhet registered the

	Value	Year	Rating	Trend
SDG3 – Good Health and Well-Being				
Traffic deaths (per 100,000 population)	16.6	2016	●	↓
SDG9 – Industry, Innovation and Infrastructure				
Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	2.4	2018	●	↑
SDG11 – Sustainable Cities and Communities				
Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m3)	25.1	2017	●	↗
Satisfaction with public transport (%)	71.6	2018	●	●

Fig. 38. Transport-related indexes extracted from Lao PDR's SDG Index Country Profile

highest rates of road accidents among Lao´s provinces, with a total of 295 cases per year (approximately 33,7 per 100,000 population)[96]. The principal causes have been identified as drink-driving, the absence of good drink driving laws, and the lack of speed limit laws. Most accidents involve young people.[97] As previously suggested, a well-designed public transport system has the potential to address these concerns, improving overall mobility conditions of the urban centre.

Though some thematic information is available at local level, the lack of reliable and consistent supporting data poses a great challenge for local governments in reporting on the achievement of the SDGs, and to the undertaking of informed and responsive decision-making. The following section of this report presents tools and methods to measure a project's impact in accordance with the themes of the SDGs.

Fig. 39. Market streets in Kaysone's urban centre. (Source: Shutterstock/ Marek Poplawski)

5.3. PROJECT'S IMPACT ON SUSTAINABLE URBANISATION: THE ASUS IMPLEMENTATION

5.3.1. Accelerating the Implementation of the ASEAN Sustainable Urbanisation Strategy (ASUS)

A key objective of the ASEAN Sustainable Urbanisation Strategy (ASUS) is to create sustainable and liveable cities, narrowing existing development gaps, strengthening resilience, promoting innovations, improving well-being, and enhancing connectivity among residents.[98]

The ASUS aims to assist local governments in the ASEAN to advance sustainable urbanisation in their cities on specific priority areas, sub-areas, and priority actions. The project proposed for Kaysone, falls under the sub-area "mobility" and the priority action to "Introduce and improve Bus Rapid Transit (BRT) systems". This action seeks to promote increased access, affordability, and efficiency of transport, as well as reducing transport-related pollutants (such as greenhouse gas emissions).[99]

The ASUS is a guideline to facilitate the development of project proposals, with the ability to adapt to the needs of each city. While Kaysone falls under the priority area of BRT systems, initial consultations with the city have revealed that a BRT system would currently be premature for the context of the city and that the initial focus should instead lie on a general transport masterplan prior to developing specific routes. Despite this change in focus, the recommendations and metrics provided by the ASUS remain valid and useful to guide the project's definition.

Finally, the ASUS Framework emphasises the importance of social inclusivity. Projects under the mobility sub-area present an opportunity to reduce commuting times and thereby, open further economic opportunities for vulnerable groups.

5.3.2. SDGs, New Urban Agenda, and ASUS Impact Reporting

Collecting disaggregated data and establishing clear indicators at project level is essential for reporting on the achievement of the ASUS framework's objectives.

As highlighted above, the ASUS framework proposes a range of suggested Performance Indicators per priority action. It also proposes metrics at subnational level to compare performances in ASUS sub-areas, and prioritise actions. As indicated in the ASUS Strategy document, long-term use of these indicators would be most effective in forming a comparative index of city-level urbanisation performance in the sub-areas.[100]

In that sense, identifying synergies between the ASUS Framework and other global monitoring frameworks for sustainable urbanisation (e.g., SDG Global Framework, SDG Index, NUA Monitoring Framework) can support local and central governments to report on the SDGs and New Urban Agenda achievements alongside ASUS project impact in a coordinated manner. The approach presented in this chapter can be used by city authorities and implementing entities working with ASUS, to define hybridised monitoring and evaluation tools for city-specific strategic goals.

The table below shows alignment between the SDGs and NUA monitoring frameworks and related performance indicators, with the metrics proposed by the ASUS Framework for the priority action to "Introduce and improve Bus Rapid Transit (BRT) systems".

Sub-area	Action	Objective	Potential Impact on Social Inclusion aspects	Performance indicators
Mobility	**Introduce and improve Bus Rapid Transit (BRT) systems**	Improve the quality and efficiency of public transport and reduce congestion	Reduced commute times opening up available economic opportunities for women and people with disabilities	• Number of people using BRT • Satisfaction rates of users • Average travel times of BRT users (compared to other modes of transport)

Fig. 40. Objectives and KPIs of the "mobility" priority action identified in the ASUS Framework

Fig. 41. Alignment between Potential Project Indicators and SDG & NUA monitoring frameworks.

		SDG Alignment (SDG Framework & SDG Index)	New Urban Agenda Alignment (NUA Monitoring Framework Indicators)
Introduce and Improve Bus Rapid Transit Systems (BRT)	**ASUS Performance Indicators for Priority Actions**		
	Increase in the number of people using improved public transport services	 SDG 11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	14. Proportion of the population that has convenient access to public transport disaggregated by age group, sex, and persons with disabilities
		N/A	44. Percentage of commuters using public transport
	Satisfaction of passengers willing to use the public transport system	 SDG 16.6.2 Proportion of population satisfied with their last experience of public services	N/A
		 SDG Index: 11. Satisfaction with public transport (%)	N/A
	Reduction in average travel times	 SDG 9.1.2 Passenger and freight volumes, by mode of transport	N/A
	ASUS Potential Metrics at Subnational Level		
	Road fatalities	 SDG 3.6.1 Death rate due to road traffic injuries	N/A
	Vehicles registered by type	N/A	N/A
	Other Potential Project Indicators		
	Reduction in carbon emissions	 SDG 3.9.1 Mortality rate attributed to household and ambient air pollution	3. Mortality rate attributed to household and ambient air pollution
		 SDG 9.4.1 CO2 emission per unit of value added	N/A
		 SDG 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	30. Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)
		 SDG 13.2.2 Total greenhouse gas emissions per year	N/A

Local level information for the indicators above were not made available for the present report. There is available data at the national level for three indicators in the SDG Index initiative, Continuous Global Monitoring (see section 5.2):

- Satisfaction of passengers using the public transport 71.6% (SDG Index 11: Satisfaction with Public transport)
- Road fatalities: 16.6 per 1,000 population (SDG Index 3: Traffic deaths)
- Reduction in carbon emissions: 25.1 concentration of particulate matter in 2017 (SDG Index 11: Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m3))

In summary, local monitoring and reporting on ASUS project implementation would be highly relevant to cities' capacity to report on other key frameworks for sustainable urbanisation such as the SDGs and the New Urban Agenda.

5.4. OPPORTUNITIES FOR REPLICATION & SCALING

The project provides an important opportunity for the city of Kaysone to develop its transport sector in order to achieve sustainable urban development and better quality of life, and provides scope for replicable and scalable mobility projects in the future. The following are examples of methods for the replication and scaling of the project:

- Implementation of pilot projects: pilot bus route(s) can be implemented to further analyse user behaviours, feedback, demand and needs. This could also highlight potential routes for governance and finance in the public transport sector.

- Development of a non-motorised transportation strategy: This would consider other modes of mobility in the city, including walking, cycling, rickshaws, etc. The strategy ensures that the first and last miles of any trip for all inhabitants is possible, increasing activity in the public realm and the perception of safety and security when walking. This would have particular benefits for female users of public transport.

- Development of a parking strategy for the urban centre: This would ensure that the city's streets are less congested and more walkable. It will also ensure that the heritage of the urban centre is preserved and formulate possible financial strategies that can be applied to fund other urban projects.

- Development of a data dissemination strategy for commuters: reliable information available for commuters can improve the efficiency of individual travel decisions and the transport system as a whole. Real-time travel information can reduce uncertainty, while also facilitating evidence-based decision making to improve management and optimise commuting times.

- Development of policies to promote and incentivise sustainable travel patterns: the project provides a baseline for the city to understand transportation needs, providing the city with lessons learned to develop policies that promote sustainable transportation such as reducing private ridership and air pollution. This would not only support improvements to the public transportation of the city but also in mainstreaming climate change in the city's plans and strategies.

Finally, the report reveals that various cities in Lao PDR lack urban transport plans, routes, or development strategies. The city of Kaysone can be a showcase to other urbanising cities and towns in Lao PDR, as Vientiane has already started a project on the construction of a Bus Rapid Transit (BRT) system.[101] If lessons learned from this project are recorded and captured, not only will the city benefit for future project implementation, but other major cities in Lao PDR can also use these to develop their own public transport systems. The project could thereby influence national level transport strategies, promoting sustainable travel in urban centres across Lao PDR. Existing networks within Asia and Southeast Asia could be leveraged to share best practices, such as the ASEAN Cities network.

6. Recommendations for Technical Proposal

The City Diagnostic report for Kaysone Phomvihane reveals a number of challenges and opportunities to be considered in the development of the technical proposal. Developing a public transport system is critical to environmental and financial sustainability, promoting urban efficiency, improving health, increasing accessibility to social, cultural, and economic opportunities, while safeguarding climate change, human rights and social inclusion.

The city of Kaysone's continuous GDP growth per capita and strategic location across the border from Thailand and along the East West Economic Corridor are potential opportunities that the city can leverage for a sustainable urban future. The city's unique heritage is a potential driver for the tourism sector, while also making it a unique place to live, due to its compact urban centre that enables walkability and access to services. The city's relatively high independence in finance and utilisation of own-source revenues, as well as its high levels of foreign direct investment are factors that could enable the city's sustainable growth.

However, the report highlights a high unemployment rate and low literacy rates as challenges that need to be addressed. The city also faces challenges in solid waste management and flooding, which make the it highly susceptible to urban flooding. While these factors could be addressed directly in another project and have no direct relation to the public transport project, they should be considered in its development.

The report reveals a drastic increase in private vehicles, traffic congestion, and pollution, triggered by the lack of an integrated transport strategy for the city. These challenges will only increase over time, leading to unmanaged growth and low-density urban sprawl, with the potential to cause environmental degradation and a loss of blue and green networks. These are critical for the city's mitigation against climate change, and their loss further exacerbates flooding in the city.

In order to address the challenges addressed above, public transport should be viewed in a wider context with a long-term time horizon. Public transport should not only be regarded for the movement of people around the city but as a mechanism to structure future growth in the city. Public transport infrastructure, even if initially developed with just a bus route, could help pave the way for upgrades in the transport system for the future. These decisions should influence planning decisions, ensuring long-term growth is considered from the inception of the project.

As such, the public transport system for Kaysone should be designed and introduced as a key structuring element for the achievement of inclusive and sustainable development, in line with the city's objectives and goals under the Socio-Economic Development Plan. The public transport route can become an economic, social and environmental intervention, that sets in motion spatial transformation for maximised impact.

Higher densities are permitted along the line and restricted elsewhere. Economic activities are encouraged and permitted along the line and especially the station (main bus stop) areas. The bulk of higher-order public facilities such as education, medical facilities, tourist attractions, public parks, civic building etc., should be located within walking distance from the stations. The public transport system should become the backbone around which sustainable TOD neighbourhoods and economic hubs develop. Concentrating activity in this way accelerates the upgrading of the public transport systems because it ensures the supporting elements and user demand are in place.

The alignment of a public transport backbone from the SSEZ to the historic town is of the utmost importance though other extensions may be devised. A more detailed study should be devised however, existing information indicates that focus on this area will facilitate the city's transformation in respect to the broader objectives set by the authorities.

Based on the above, the following recommendations should be considered in the development of the project proposal:

- **Careful planning and design of transport routes.** The transport route coverage of the city must ensure access to job opportunities and educational facilities in order to increase accessibility in the long-term. The technical proposal should conduct further analysis to assess the design of the routes, but it should take into account concentration of economic activities, land use, population density,

education facilities and connectivity analysis. The proposed public transport routes should prioritise the connection between the urban core/historic town and the SSEZ.

- **Developing an integrated transport plan that considers formal and informal, motorised and non-motorised routes.** An integrated transport plan will ensure that varied public transport options are efficient, affordable and accessible to low income population groups. The transport system needs to be comprehensive, considering feeder networks, possible informal and non-motorized networks. The city's potential for touristic growth should also be considered; for example, bus routes could be designed to connect major tourist attractions, or utilise a standardised ticketing system that can enable route changes.

- **Assessing the impact of Savan-Seno Economic Zone (SSEZ) on the city's growth.** The growth of the city due to the presence of SSEZ could impact the local population's access to jobs, housing, land ownership, and could increase the cost of living. Such factors will have implications on the design of a public transportation project, requiring transport routes be connected to areas of employment.

- **Safeguarding social inclusion.** Factors relating to social inclusion for all should be safeguarded throughout the development of the project, ensuring that the design is affordable, reliable, and accessible to all. Plans should take consumer preferences into account, through effective participatory processes. The city's transport system must also service multiple needs from diverse sectors of society; it is key that studies be undertaken to understand the specific needs of potential stakeholders, where they travel and at what times of the day. This will ensure that the project can be scaled in the future, in accordance with increased demand from inhabitants, and awareness of their role in designing their city.

- **Prioritisation and alignment of projects through an integrated plan.** While the city has various ongoing projects with international donors

Fig. 42. Aerial view of the city. (Source: Shutterstock/ Phoutthavong Souvannachak)

and development partners, further evidence is required to assess whether these initiatives are taking place within an integrated framework. A clear vision supported by a master plan can ensure that the city's potential projects are aligned in their goals. The design of any public transport system needs to account for projected urban growth (including economic changes, population demographics and movement patterns), as envisioned in a masterplan or other strategic planning document.

- **Ensuring effective governance, vertically and horizontally.** Overlapping and unclear responsibilities between governmental departments, both vertically and horizontally, hinder planning processes. To develop an integrated transport plan, clear roles and responsibilities should be delimited in the multiple levels of governments. Kaysone's growth could extend beyond the city's boundaries. Coordination with the province is essential to ensure planning for this.

- **Integrating urban planning and transport planning. The current growth patterns reveal concentration along key infrastructures.** Proactive planning for transport can determine future urbanisation and ensure the city grows efficiently. As such, transport and land-use planning need to be integrated and coordinated. This can take place on both city and street scale; the planning of transport should consider factors relating to the growth of the city, particularly in relation to SSEZ, while at street scale, non-motorised transport should be promoted by increasing sidewalks and removing on-street parking.

- **Building capacity in data collection and analysis for effective implementation, monitoring and evaluation.** Data evidence is key to the implementation of realistic integrated transport plans. The city's data collection and analysis capacity data require further assessment, especially as the planning team was disbanded five years ago. The city has indicated that enforcement, monitoring and evaluation, and maintenance are key challenges. The project

Fig. 43. Kaysone Park. (Source: Shutterstock/ Anousith Sikhoth)

proposal should ensure that it addresses data collection as well as continuous monitoring and evaluation, and regular user satisfaction and affordability surveys, providing the evidence-base for improvements to be made to the public transport system. This is not only critical for the transport project, but for the future growth of the city, ensuring its trajectory towards achieving the Sustainable Development Goals, the New Urban Agenda, The Paris Agreement, and ASEAN's Sustainable Urbanisation Strategy.

- **Identifying funding streams.** A variety of funding streams should be explored within the technical proposal, including but not limited to international grants, national transfers, and public-private-partnerships.

- **Integration of Climate Change.** The city has exhibited considerable internal interest in building its capacity to integrate climate change into other studies and projects. As such, the technical project should build on the existing initiative and integrate climate change mitigation and adaptation strategies, informed by the results from other studies.

Fig. 44. Transportation in the city's historical centre. (Source: Shutterstock/amnat30)

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