

# Sustainable Urban Transport Index (SUTI) Report

## GREATER SUVA AREA, FIJI



**Ministry of Infrastructure and Transport**

**Suva, Fiji**

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# SUTI Report for Greater Suva Area, Fiji

## Executive Summary

Greater Suva Area, includes four cities Suva, Nasinu, Nausori, and Lami Towns. Suva the capital of Fiji, is one of largest city in the Pacific with population of about 280,000 (2014 estimate). Due to population growth in urban areas and other emerging towns, Greater Suva Area suffers from various urban transport problems. Lack of reliable public transport systems, good transport infrastructures, bus stops and facilities, increasing fuel consumption and vehicle emission are few to mention. In order to assess the state of urban transportation systems and services in the Greater Suva area, the Sustainable Urban Transportation Index (SUTI) developed by UNESCAP is used which has 10 indicators. Through 10 indicators an urban transport system of a city can be evaluated. A quantitative analysis of Greater Suva urban transport system, is done in this report using SUTI tool. The basic benefit of this study is that it can provide the Town councils and the Ministry of Infrastructure and Transport, Fiji and Road Authority and other related stakeholders a policy direction to focus on improving overall accessibility and sustainability of urban transport systems and services. The data collection guideline developed by UN ESCAP is used for data collection and data analysis. Number of meetings took place in the Ministry, a workshop with key stakeholders was held at UNESCAP Pacific Office, SUTI was presented at the National Transport Forum in Lami on October 2018. The Ministry of Infrastructure and Transport, Fiji took the lead and coordinated with stakeholders for data collection and compilation (mostly based on secondary data). The geometric mean of the index is 53. 94 which interprets that overall transport system is in fairly good situation, However, the analysis indicates that the areas that needs attention. Firstly, the comprehensive city mobility plan should include facilities for pedestrian and cyclists, and the coverage of public transport accessibility is 60 per cent which needs improvement. The report also points out the need to have policies and actions in place to improve mode share of active and public transport, more investment in public transport, lack of air quality monitoring stations indicates the need to establish a new station, even though GHG emissions is within limit- in order to make transport carbon neutral – many policies and initiatives are required. In addition, Greater Suva area and Fiji should work towards improving overall SUTI score by improving the indicators mentioned above.

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# 1. DATA COLLECTION APPROACH FOR SUTI

## 1. Introduction to Suva

Greater Suva Area (GSA), Fiji's largest urban agglomeration, includes four municipalities: Suva, Nasinu, Nausori, and Lami Towns. Suva, the capital of Fiji, is one of the largest cities in the Pacific, with a population of about 280,000 (2014 estimate). GSA accounts for 31% of Fiji's population and 59% of its urban population. By 2030, the population of GSA is estimated to be 345,000.

While agriculture and fishing predominate the economic base of Fiji, the significance of tourism, sugar manufacturing, textiles, garments, footwear, tobacco etc., is growing. GSA, as the national capital, is the political, economic and cultural capital of the Pacific, hosting several regional headquarters for companies and international agencies.

It is also a major hub for shipping services between North America, Australia and New Zealand. It acts as a distribution centre for regional South Pacific countries. These activities have a significant impact on the land transport network.

The Greater Suva Area is an island city cluster with low density development along the Suva Nausori corridor. GSA development is concentrated along three major roads: Kings Road linking Suva to Nausori and the north coast of Viti Levu, Queens Road, linking Suva to Lautoka via Lami, Pacific Harbour and Nadi, and Princess Road – via the Tamavua Ridge to the Waimanu River and Nausori.

Beyond the major roadways, there is no distinction between major and minor local roads. Not having redundancy in the network due to lack of bridges across the rivers is another major issue.

In terms of the transportation system, GSA relies heavily on road transport. The public transport system in Greater Suva is considered generally 'good' and consists mainly of private bus, mini bus and carries (para transit). The bus operation is mainly undertaken by the private sector and transport infrastructure and facilities are inadequate. About 9% of the trips are walk trips; however, the infrastructure for walking is inadequate.

## **2. Data collection approaches**

Data collection for different indicators to develop SUTI comprises of field data collection, data collection from appropriate authority and reviewing different relevant sources. The following consultation meetings with ESCAP and the Ministry were held.

### **a. First consultation meeting teleconference**

In order to initiate the process for the application of SUTI in Suva a teleconference was held on 21 June 2018 with ESCAP and the Ministry representatives. It was decided to go ahead with the assessment and the ministry mentioned that due to recent household survey they have most of data required for SUTI assessment and data for two/three indicators need to be collected and compiled. The Ministry team would take lead in compiling the data. Local coordination with the Ministry was done by the ESCAP Pacific Office.

### **b. Consultation meeting at the Ministry**

A consultation meeting between ESCAP and SUTI team was held at the Ministry in Suva in October. The meeting discussed and reviewed the data collected for the indicators and held detail discussion on assessment of each indicator. Some estimate of accessibility, affordability and operational cost was made. ESCAP team also had a courtesy call to the Permanent Secretary and Deputy Secretary of the Ministry.

### **c. SUTI workshop with related stakeholders in Suva, ESCAP Office**

A capacity building and consultation workshop was held at the ESCAP office in Suva. About 24 related stakeholders in Suva attended the workshop. The methodology, data collection guidelines and SUTI Excel sheet were presented and Prof. Swamy presented improving urban mobility in urban areas and the Ministry made a presentation on state of transport and urban transport system in Fiji and Suva. Detailed discussions followed the presentations. The main points raised were support needed to private sector to import electric vehicles, need to improve facilities such as bus stops and extend public transport routes.

### **d. National Transport Consultation Forum**

A two-day National Consultative Forum: Navigating the Changing Climate for Sustainable Transport was held in October 2018. Various national stakeholders made presentations outlining Fiji strategies and transport sector plan and policies. As the Presidency of COP23 Fiji has announced to be carbon neutral by 2050 with net zero emissions. Transport sector is

contributing to 10 per cent of the GDP. The Nationally Determined Contribution (NDC) pledge to reduce 30 per cent emission reduction by 2030. Fiji is working on developing Low Emission Development Strategy (LEDS). SUTI was presented at the national transport consultation forum.

### a. Data collection approach

The ten SUTI indicators are shown in Table 1.

Table 1: Different indicator of SUTI

<b>Indicators</b>	<b>Description</b>
1	Extent to which transport plans cover public transport, intermodal facilities and infrastructure for active modes
2	Modal share of active and public transport in commuting
3	Convenient access to public transport service
4	Public transport quality and reliability
5	Traffic fatalities per 100,000 inhabitants
6	Affordability – travel costs as part of income
7	Operational costs of the public transport system
8	Investment in public transportation systems
9	Air quality (PM10)
10	Greenhouse gas emissions (CO <sub>2</sub> eq tons/year)

Overall data collection procedure and analysis along with sources for different indicators are described below:

#### **Indicator 1**

Indicator 1 is analyzed based on most recent Greater Suva Transportation Strategy (GSTS) (2015-2030) and other related transport policy documents of Fiji. The GSTS mainly focus on land transport and has a great vision “Greater Suva aspires to have an integrated and sustainable transport systems that contributes to an inclusive, prosperous and environmentally responsible region”. It covers all related issues such as traffic congestion, enforcement and regulation, bus infrastructure and routes, quality of transport infrastructure, road safety and driver education and awareness. It was felt that more focus was needed for walking and cycling infrastructure and intermodal transfer facilities. Some of the proposed solutions listed are: dedicated bus lanes, improved bus terminals, linked traffic signals, improved pedestrian safety, enforcement of traffic laws and rules, intersection upgrade and capacity upgrade and bus network planning.

#### **Indicator 2**

Data required for indicator 2 mode share are based on data available in the Greater Suva Transportation Strategy (GSTS) (2015-2030), Fiji Household Survey 2015 and other related documents.

### **Indicator 3**

Ideally the indicator 3 should be calculated by using Geographic Information System (GIS) or public transport routes and population density map of the Greater Suva Area. Bus route map along with bus stoppage points need to be analyzed to calculate the percentage of people having convenient accessibility to public transports. However, for this due to lack of GIS route map, estimate based on route map and coverage was estimated.

### **Indicator 4**

To calculate this indicator 4 user satisfaction survey, need to be conducted at bus stops and on-boards, along busy bus routes. Passengers who use public transports in their day to day life are asked questions about the reliability and quality of public transports. Due to lack of survey, it is again based on perception of local and officials.

### **Indicator 5**

Fiji Police has the official responsibility to collect accident data. The fatality data are based on Police records, and based on other reports as well as Global Status Report on Road Safety (WHO, 2018) for Fiji.

### **Indicator 6**

Data is based on estimate of average daily transport trip cost and monthly cost and the monthly minimum wage is used to calculate affordability.

### **Indicator 7**

Fiji public transport is mostly operated by the private sector. It was mentioned during the consultation meeting that the private sector is generating profit and unlike other Asian cities government and local government does not provide any subsidies. Only some form of support is provided to the school buses. On this assumption, the farebox ratio is estimate as 100% for assessment, it could be higher but private sector did not reveal the figure.

### **Indicator 8**

Both the data of investments on public transport and on active transport over the last five-year and total transport investments by the city government, central government and development partner over the same period (including, roads, signals, infrastructure, public transport facilities, facilities for pedestrians and cyclists, etc.) are to be collected from annual reports and related secondary source. The data is mainly based on information on GSTS.

#### **Indicator 9**

There are no Continuous Air Monitoring stations (CAMS) installed in Suva or Fiji. In absence of air quality monitoring stations secondary data from research paper are used for PM10.

#### **Indicator 10**

Two approaches could be used total fuel consumption (diesel and petrol) and CO<sub>2</sub> emitted from fuel burning is calculated using standard CO<sub>2</sub> emission factor. Other approach is to have activity-based emissions based on average vehicle km travelled by each type of vehicle and their emission factor. Estimate available in from reports and GGGI is used.

## 2. ANALYSIS OF DATA

### **Indicator 1: Extent to which transport plans cover public transport, intermodal facilities and infrastructure for active modes**

In the following table, the marking on these 4 aspects along with a brief explanation is provided:

Table 2: Scoring analysis for indicator 1

Aspects	Explanation	Score
Walking Networks	<ul style="list-style-type: none"><li>-Need to increase use of active transport mode is recognized by improving walking facilities</li><li>-Acknowledge the need of more pedestrian crossings, improved lighting, dedicated footpaths</li><li>-Not much clear on budget and expenditure to improve walking</li></ul>	2
Cycling Networks	<ul style="list-style-type: none"><li>-Active mode is acknowledged as an important option still cyclists are not well supported by existing infrastructure.</li><li>-Opportunity to improve mode share by providing dedicated bike lane</li></ul>	1
Intermodal Transfer Facilities	<ul style="list-style-type: none"><li>-The strategy mentions integration of transport and land use</li><li>-as the public transport is predominately by land transport not much plan on intermodal facilities</li><li>-improvement of bus stations and stops are mentioned, need to have integration with water transport where necessary and backed by funding</li></ul>	1

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