

## USER MANUAL

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### Geospatial Information Platform for COVID-19 (GIPC) version 1.2

1. The link to the GIPC in Sri Lanka portal is <http://103.156.150.93:94>.



# USER MANUAL

## 1.1 First, sign up your account. e.g., user name: [tom@example.com](mailto:tom@example.com)

Sign up

Email

admin@gipc.com

Password  
(6 characters minimum)

.....

Password confirmation

.....

SIGN UP

Here, 4 functions of system

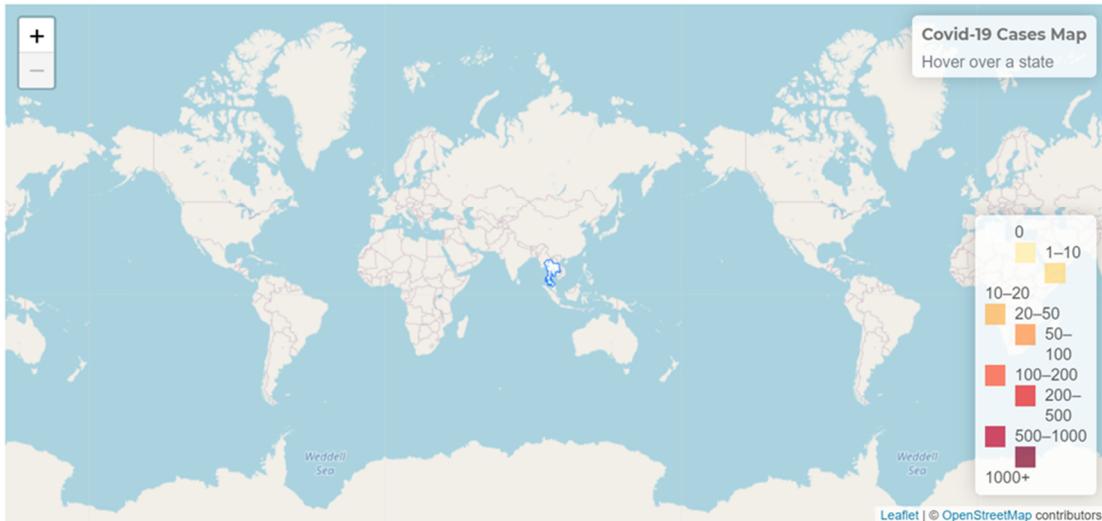
- 01 COVID-19 Cases Management**
- 02 Living Supplies Management**
- 03 Medical Capacity Management**
- 04 Vaccine Registration Form**
- 05 COVID-19 SIR Model**

# USER MANUAL

After login to the system, you are now ready to start using the system!

## Summary Report

The overview of current COVID-19 situation of the World



Here, shows the system functions at left side

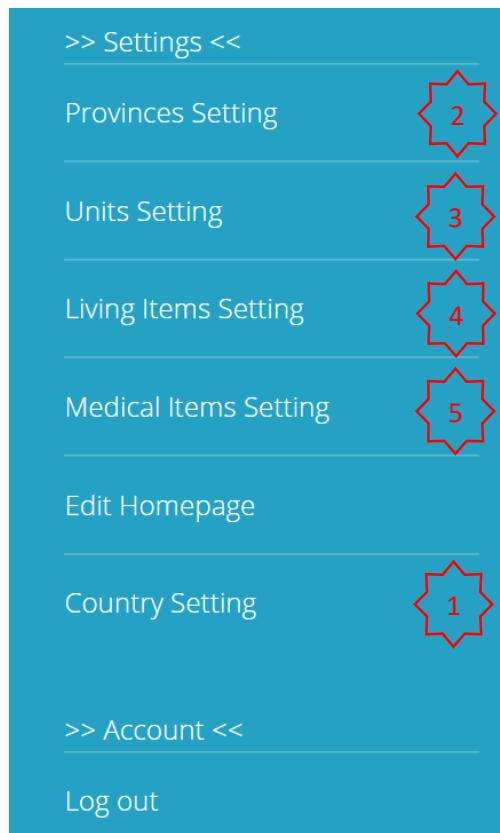
The screenshot shows the system's user interface. On the left, a vertical sidebar menu is highlighted with a red border and three red arrows pointing to its sections: "Functions" and "Settings". The menu items include:

- Home
- >> Report <<
- COVID Summary Report
- Medical Summary Report
- Living Summary Report
- Vaccine Register Report
- COVID-19 SIR Model
- >> Functions <<
- Covid-19 Cases Management
- Living Supplies Management
- Medical Capacity Management
- Vaccine Registration Form
- >> Settings <<
- Provinces Setting
- Units Setting
- Living Items Setting

In the center, there is a header with logos for United Nations ESCAP, DO, GISTDA, and ARTSA. Below the header is a title "Summary Report" and a subtitle "The overview of current COVID-19 situation of Sri Lanka". A map of Sri Lanka is displayed, showing case density by district. The map includes labels for major cities like Kochi, Madurai, and Trivandrum, and geographical features like the Gulf of Mannar and the Indian Ocean. A legend for the map is identical to the one on the world map, ranging from 0 to 1000+ cases. At the bottom of the screen, there are two small charts: "Gender Distribution" and "Age Distribution".

# USER MANUAL

## 1.2 After successfully login an account, you need to set up the system in order first



Click the **Country Setting** and then click the **New Countryinfo**

### New Countryinfo

Country Name:

Country ISO code:

Center Longitude:

Center Latitude:

Zoom Level:

Map Height:

px

**CREATE COUNTRYINFO**

# USER MANUAL

Fill the parameters of Country information, you can search basic information by Google map/Wiki in order to link with web mapping

Sri Lanka / ISO code  
**LKA**

People also search for  
Nepal NPL Maldives MDV Bhutan BTN

Feedback

<https://www.iso.org/obp/>

**LK - Sri Lanka - ISO**  
the Democratic Socialist Republic of Sri Lanka. Alpha-3 code. LKA ... Sri Lanka Department of Census and Statistics: Map 1: Province, District, ...

  
Map data ©2021 Google

**Sri Lanka**  
Country in South Asia

Sri Lanka, formerly known as Ceylon, and officially the Democratic Socialist Republic of Sri Lanka, is an island country in South Asia. It lies in the Indian Ocean, southwest of the Bay of Bengal, and southeast of the Arabian Sea; it is separated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait. [Wikipedia](#)



Sri Lanka - Google Maps

[google.com/maps/place/Sri+Lanka/@7.8571803,78.4618427,7z](https://google.com/maps/place/Sri+Lanka/@7.8571803,78.4618427,7z)

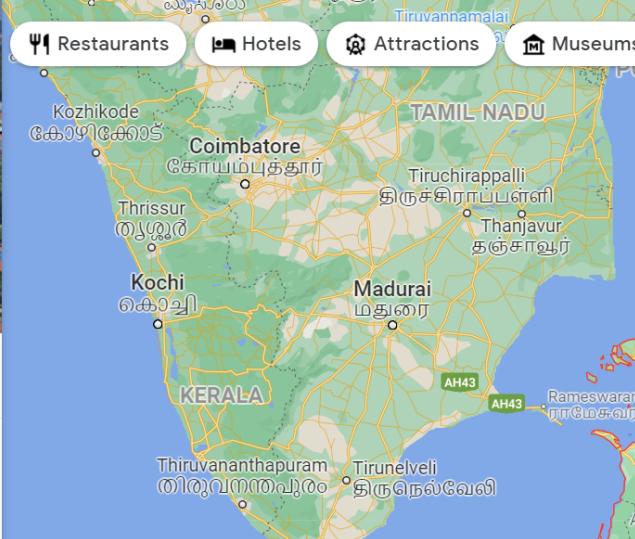
**Sri Lanka**



**Restaurants** **Hotels** **Attractions** **Museums**

Kozhikode, Coimbatore, Tiruchirappalli, Thanjavur, Madurai, Kochi, Thiruvananthapuram, Tirunelveli, Rameswaram

Directions Save Nearby Send to your phone Share



# USER MANUAL

E.g., Country Setting (Parameters would be adjusted by different requirement of users):

Country Name: Sri Lanka

Country ISO code: LKA

Center Longitude: 7.874746

Center Latitude: 80.1981852

Zoom Level: 7

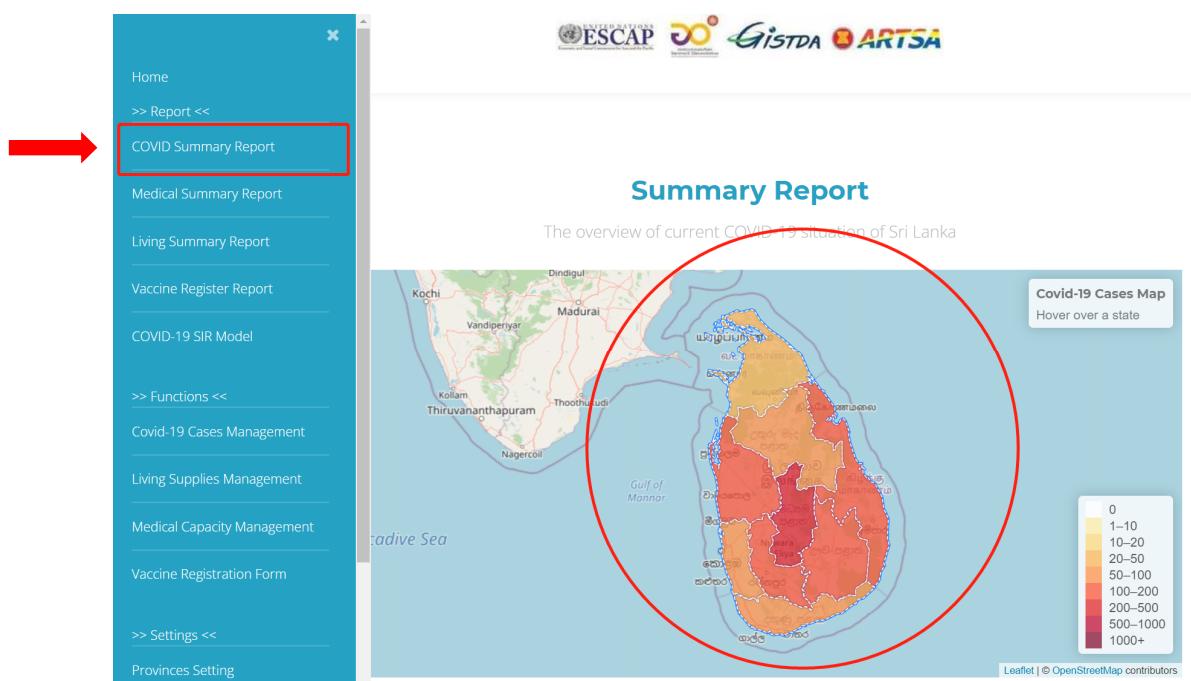
Map Height: 450

The screenshot shows a form titled "Editing Country Information". It contains the following input fields:

- Country Name: Sri Lanka
- Country ISO code: LKA
- Center Longitude: 7.874746
- Center Latitude: 80.1981852
- Zoom Level: 7
- Map Height: 450 px

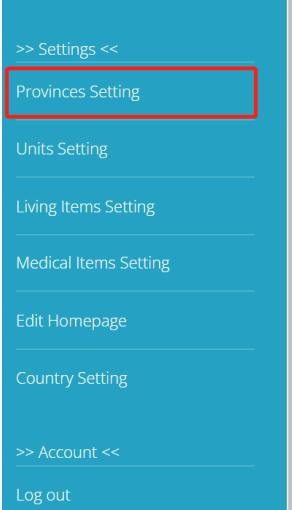
At the bottom right of the form is a red "UPDATE COUNTRYINFO" button.

After add country information, you can click the **COVID Summary Report** to see your interactive map, the parameters would be adjusted by different requirement of users.



# USER MANUAL

## 1.3 Users at province level will login to the GIPC portal using their registered email. So, you need to go to province setting.



Name	Remark	Show	Edit	Remove
Central	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Eastern	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
North Central	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
North Western	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Northern	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Sabaragamuwa	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Southern	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Uva	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Western	MultiPolygon	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>

## New Province

Name

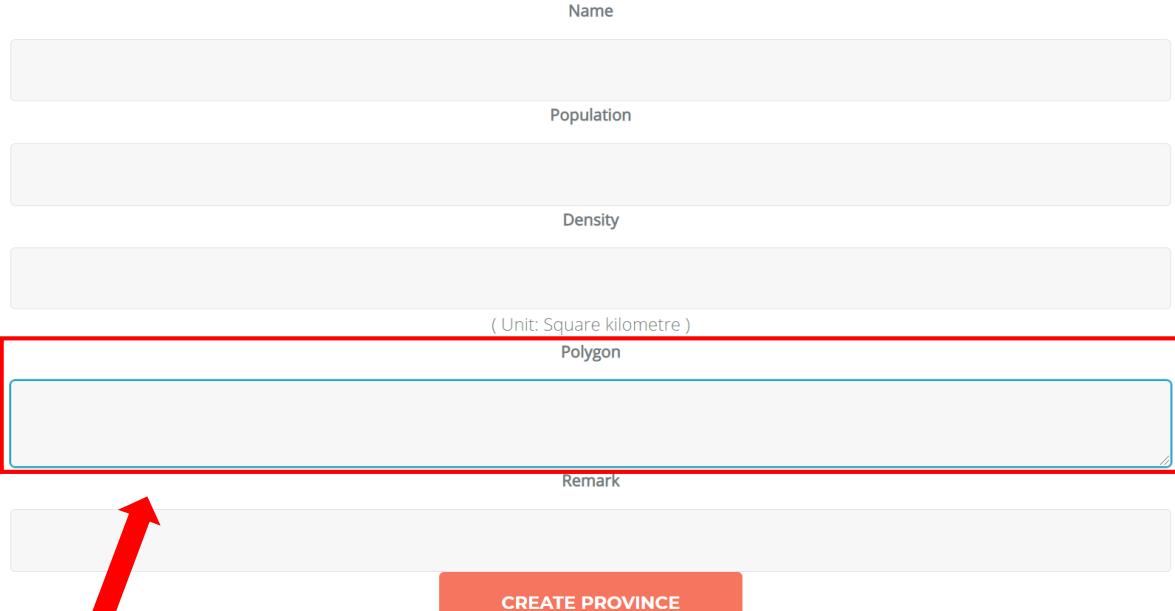
Population

Density

(Unit: Square kilometre)  
Polygon

Remark

**CREATE PROVINCE**



NOTE: Before add province information, you need a very important Geojeson format for web mapping.

## USER MANUAL

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### 1.3.1 Download administrative level 1 (province) of GeoJSON

GeoJSON is a format for encoding a variety of geographic data structures. First download GeoJSON file for the geographic area you are interested in e.g., LKA is Alpha-3 code of Sri Lanka. The link of Geojson Open Data as following

[https://www.geoboundaries.org/data/1\\_3\\_3/zip/geojson/](https://www.geoboundaries.org/data/1_3_3/zip/geojson/)

## Index of /data/1\_3\_3/zip/geojson

Name	Last modified	Size	Description
<a href="#">Parent Directory</a>			
<a href="#">AFG/</a>	2018-08-30 12:22	-	
<a href="#">AGO/</a>	2018-08-30 12:22	-	
<a href="#">ALB/</a>	2018-08-30 12:21	-	
<a href="#">AND/</a>	2018-08-30 12:20	-	
<a href="#">ARE/</a>	2018-08-30 12:22	-	
<a href="#">ARG/</a>	2018-08-30 12:20	-	
<a href="#">ARM/</a>	2018-08-30 12:20	-	
<a href="#">ATG/</a>	2018-08-30 12:21	-	
<a href="#">AUS/</a>	2018-08-30 12:20	-	
<a href="#">AUT/</a>	2018-08-30 12:26	-	
<a href="#">AZE/</a>	2018-08-30 12:20	-	
<a href="#">BDI/</a>	2018-08-30 12:23	-	

## Index of /data/1\_3\_3/zip/geojson/LKA

Name	Last modified	Size	Description
<a href="#">Parent Directory</a>			
<a href="#">LKA_ADM0.geojson.zip</a>	2018-08-30 12:23	525K	
<a href="#">LKA_ADM1.geojson.zip</a>	2018-08-30 12:23	862K	
<a href="#">LKA_ADM2.geojson.zip</a>	2018-08-30 12:23	1.2M	
<a href="#">LKA_ADM3.geojson.zip</a>	2018-08-30 12:23	12M	
<a href="#">LKA_ADM4.geojson.zip</a>	2018-08-30 12:24	62M	

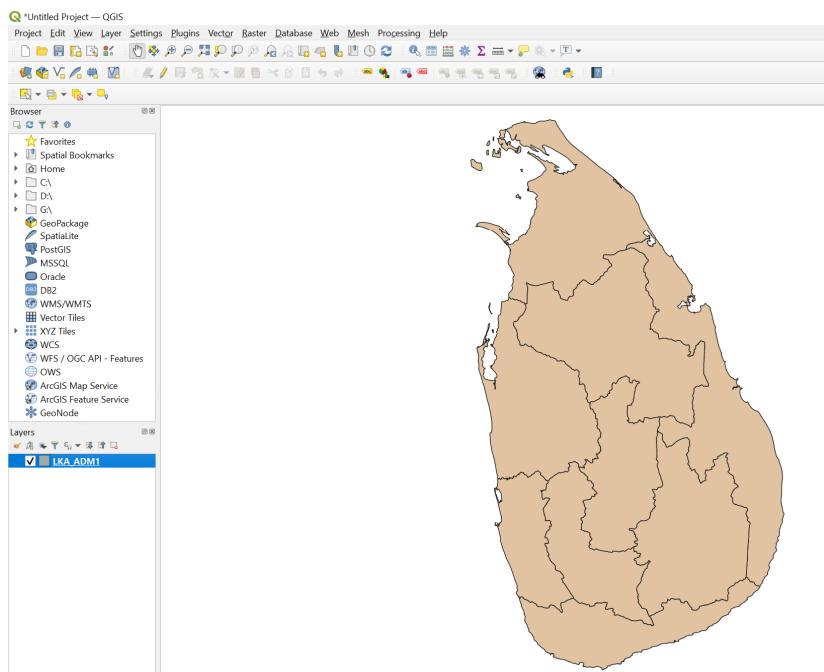


NOTE: Sri Lanka administrative level 0 (country), 1 (province), 2 (district), and 3 (sub-district) boundaries.

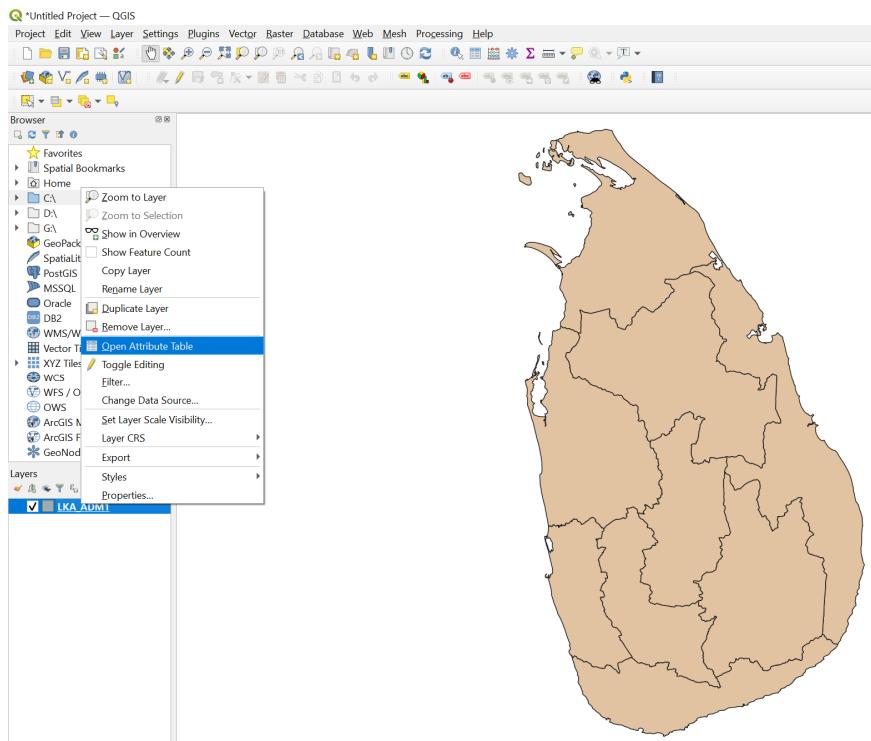
# USER MANUAL

## 1.3.2 Processing GeoJSON in Quantum GIS (QGIS)

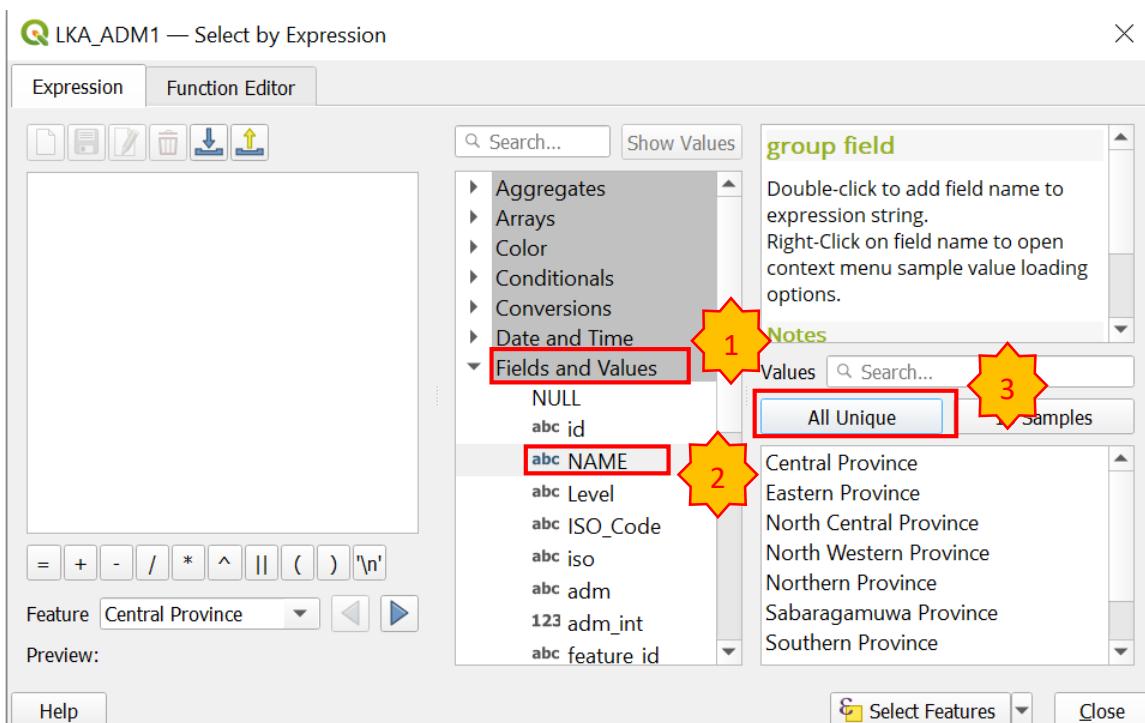
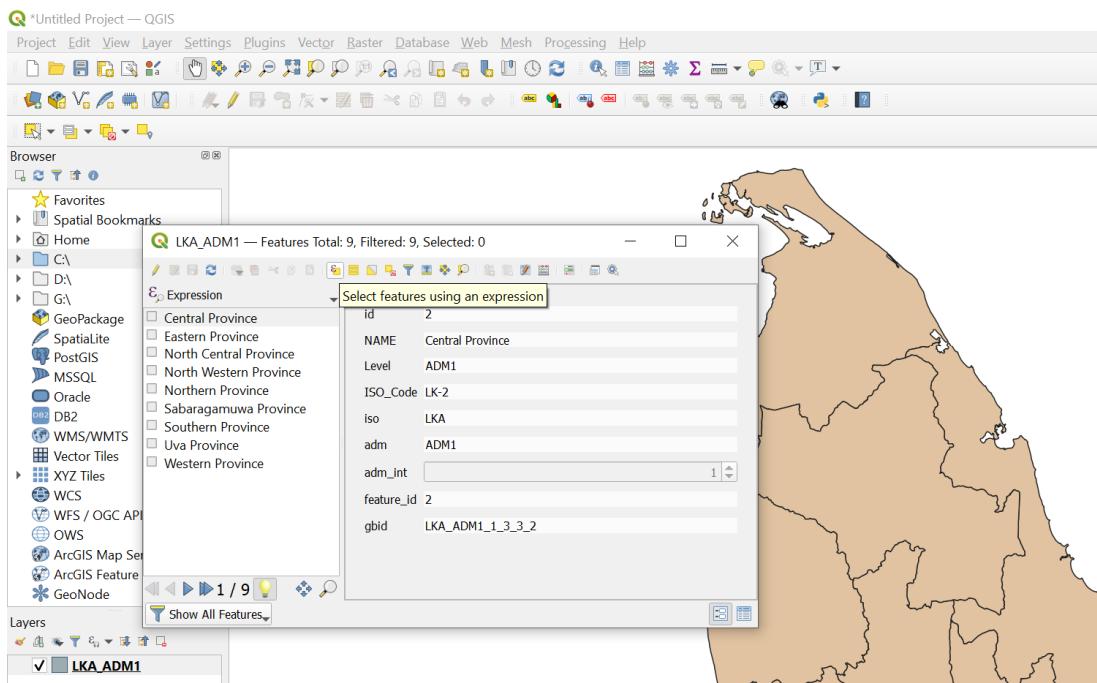
If you already get a GeoJSON file, you can just drag and drop it (e.g., **LKA\_ADM1**) from the Forder into the Layers Panel.



In the case of QGIS, exporting is done layer-by-layer. To export a layer to GeoJSON format use **Select by Expression** tool. **Select By Attributes** allows you to provide a SQL query expression that is used to select features that match the selection criteria.

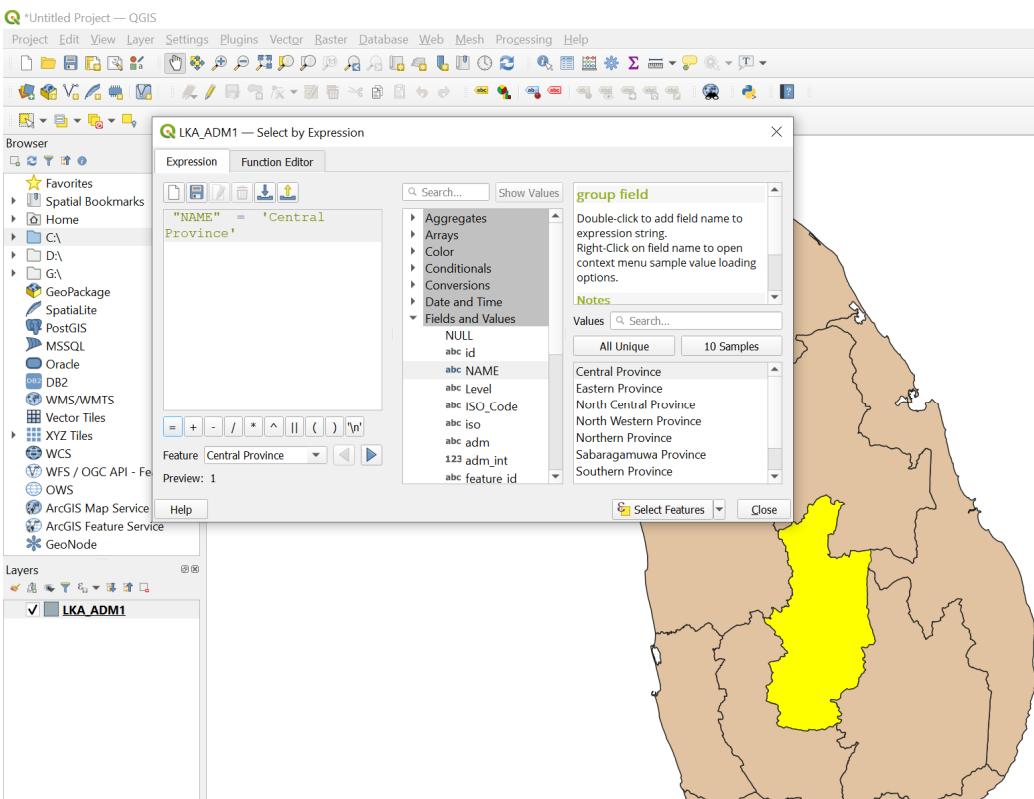


# USER MANUAL

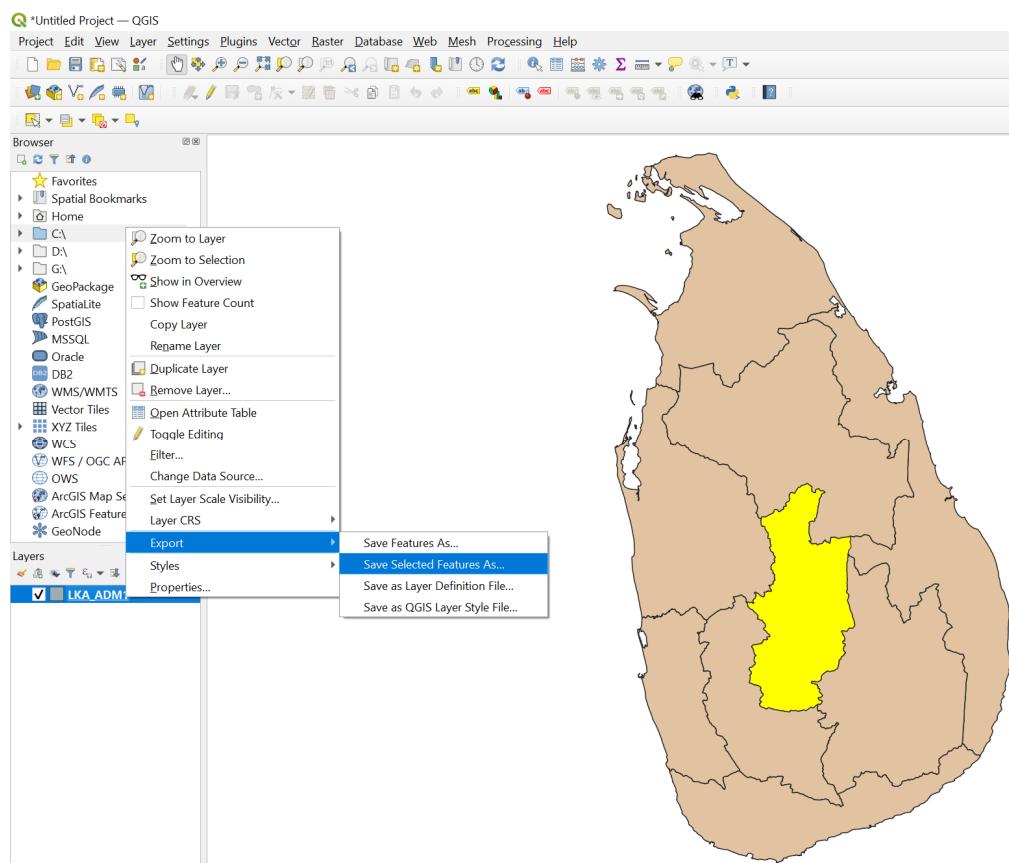


- 1) From the attribute toolbar, click **Select Features by Expression**
- 2) On the Select by Expression window, click **Fields and Values** the column you want to use. In this case, we use “**NAME**” column.
- 3) Type your criteria. In this example, we want to filter or select province which name is **Central**.
- 4) Click **Select Features** and then you should see the selected features that match your criteria.

# USER MANUAL

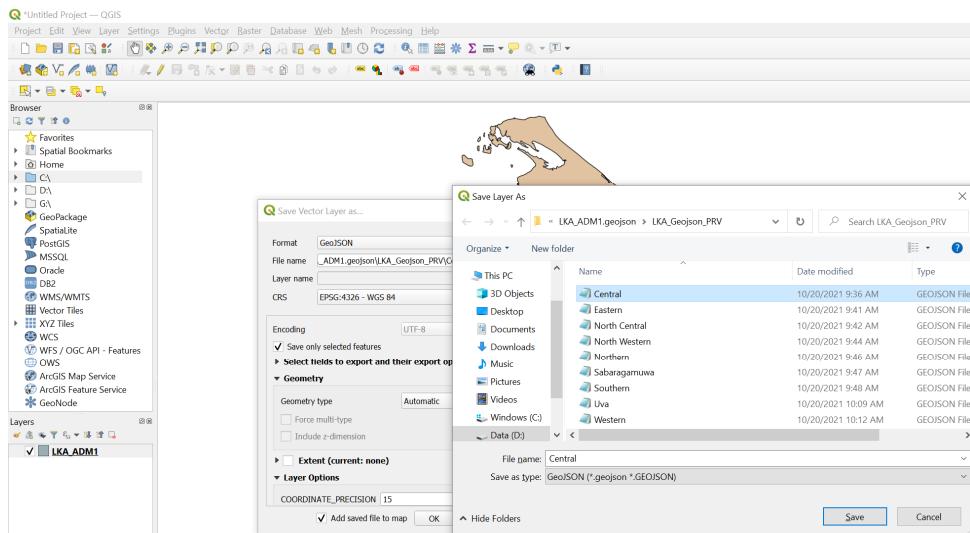


After you select the area, then you can look at the left menu, right-click on the Layers Panel, then click **Export** and click **Save Features As**.

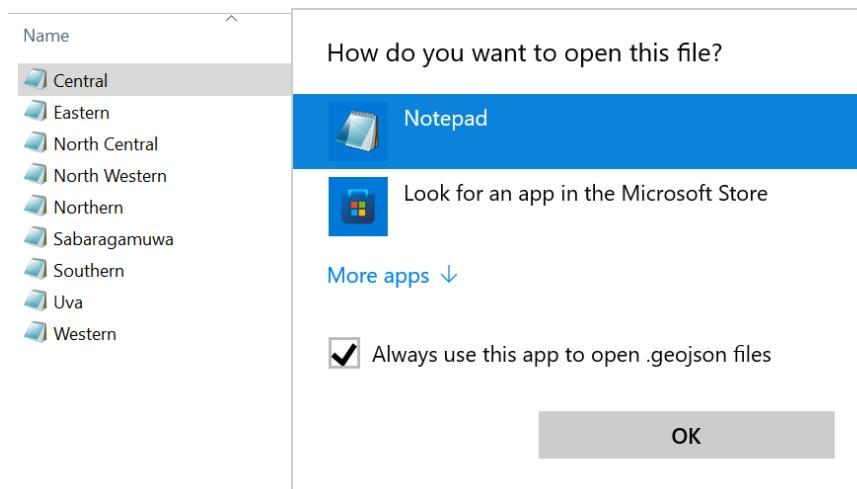


# USER MANUAL

Change the Format to **GeoJSON**, name the file and the location and then click **OK**.



After export your GeoJSON file, then you can open it with **Notepad**



```
{
  "type": "FeatureCollection",
  "name": "Central",
  "crs": { "type": "name", "properties": { "name": "urn:ogc:def:crs:OGC:1.3:CRS84" } },
  "features": [
    {
      "type": "Feature",
      "properties": { "id": "2", "NAME": "Central Province", "Level": "ADM1", "ISO_Code": "LK-2", "iso": "LKA", "adm": "ADM1", "adm_int": 1, "feature_id": "2", "gbid": "LKA_ADM1_1_3_3_2" },
      "geometry": { "type": "MultiPolygon", "coordinates": [ [ [ [ 80.421896, 7.353206 ], [ 80.422148, 7.35518 ], [ 80.4231315, 7.3570753 ], [ 80.4248484, 7.3590849 ], [ 80.4262087, 7.3596149 ], [ 80.4277148, 7.359133 ], [ 80.4319902, 7.3566757 ], [ 80.4359741, 7.3537364 ], [ 80.4373345, 7.3533028 ], [ 80.4389377, 7.3537846 ], [ 80.4408325, 7.3552301 ], [ 80.4425606, 7.3563308 ], [ 80.4452051, 7.3573502 ], [ 80.4472942, 7.3560975 ], [ 80.4487031, 7.3540737 ], [ 80.4529785, 7.3511345 ], [ 80.4554077, 7.3501708 ], [ 80.457011, 7.3500262 ], [ 80.4590195, 7.3512512 ], [ 80.4597803, 7.3526282 ], [ 80.4588572, 7.3552783 ], [ 80.4580798, 7.3565793 ], [ 80.4576183, 7.3570852 ], [ 80.4568895, 7.357278 ], [ 80.4559664, 7.3572298 ], [ 80.4551574, 7.3568087 ], [ 80.4542174, 7.3571816 ], [ 80.4535858, 7.3580007 ], [ 80.4532214, 7.3590849 ], [ 80.4527842, 7.359904 ], [ 80.4521526, 7.3605304 ], [ 80.451606, 7.3611688 ], [ 80.4514108, 7.3617441 ], [ 80.4516265, 7.3623414 ], [ 80.4531812, 7.363811 ], [ 80.4543472, 7.3650156 ], [ 80.4551488, 7.3662924 ], [ 80.4558668, 7.3682098 ], [ 80.4561899, 7.3704173 ], [ 80.457577, 7.3718227 ], [ 80.4576985, 7.3723527 ], [ 80.4576077, 7.3734663 ], [ 80.4577471, 7.3738825 ], [ 80.4579232, 7.3745125 ], [ 80.4589565, 7.3749572 ], [ 80.4601277, 7.3752316 ], [ 80.4620103, 7.3755809 ], [ 80.4641413, 7.3763523 ], [ 80.464312, 7.3765747 ], [ 80.4643897, 7.3769938 ], [ 80.4656463, 7.3800602 ], [ 80.4672577, 7.3842002 ], [ 80.4678812, 7.3851674 ], [ 80.468347, 7.3868602 ], [ 80.4688007, 7.3875115 ], [ 80.4695565, 7.3881248 ], [ 80.4701577, 7.3890787 ], [ 80.4703638, 7.3900326 ], [ 80.4697626, 7.3915827 ], [ 80.4696302, 7.3921536 ], [ 80.4698258, 7.3926876 ], [ 80.4701264, 7.3929687 ], [ 80.4708307, 7.3931475 ], [ 80.4720245, 7.3933179 ], [ 80.47221, 7.3934513 ], [ 80.4722392, 7.3937267 ], [ 80.4720073, 7.394144 ], [ 80.4716036, 7.3950298 ], [ 80.471515, 7.3957077 ], [ 80.4716644, 7.3963765 ], [ 80.4715748, 7.3966191 ], [ 80.471446, 7.3968193 ], [ 80.471008, 7.397194 ], [ 80.4702092, 7.3977689 ], [ 80.4700461, 7.3979605 ], [ 80.469943, 7.3981948 ], [ 80.4698528, 7.3985014 ], [ 80.4698722, 7.3991309 ], [ 80.4700182, 7.4001018 ], [ 80.4699495,
```

# USER MANUAL

## 1.4 Back to GIPC, and add province information.

New Province

Name: Central

Population: 2571557

Density: 461

( Unit: Square kilometre )

Polygon:

```
80.426901, 7.334291 ], [ 80.426032, 7.336078 ], [ 80.425662, 7.338009 ], [ 80.424659, 7.339763 ], [ 80.42431, 7.34171 ], [ 80.424101, 7.343717 ], [ 80.424181, 7.345723 ], [ 80.423355, 7.347552 ], [ 80.422347, 7.349322 ], [ 80.422003, 7.351254 ], [ 80.421896, 7.353206 ]]]
```

Polygon type: MultiPolygon

CREATE PROVINCE

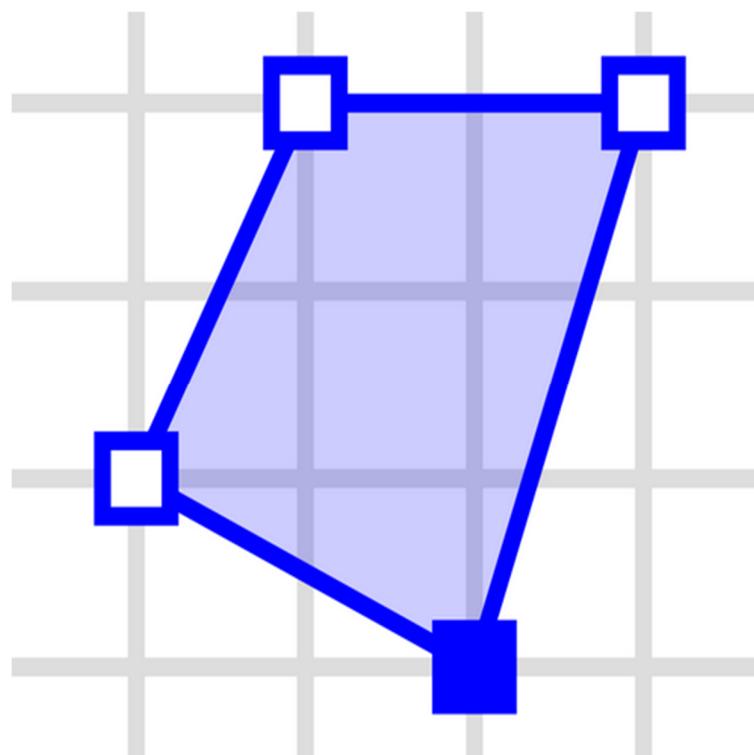
Back

```
{
  "type": "FeatureCollection",
  "name": "Central",
  "crs": { "type": "name", "properties": { "name": "urn:ogc:def:crs:OGC:1.3:CRS84" } },
  "features": [
    {
      "type": "Feature", "properties": { "id": "2", "NAME": "Central Province", "Level": "LKA", "adm": "ADM1", "adm_int": 1, "feature_id": "2", "gbid": "LKA_ADMIN_1_3_3_2" },
      "geometry": {
        "type": "MultiPolygon", "coordinates": [ [ [ [ 80.421896, 7.353206 ], [ 80.422148, 7.355184 ], [ 80.4248484, 7.3590849 ], [ 80.4262087, 7.3596149 ], [ 80.4277148, 7.359133 ], [ 80.43537364 ], [ 80.4373345, 7.3533028 ], [ 80.4389377, 7.3537846 ], [ 80.4408325, 7.35452051 ], [ 80.4452051, 7.3573502 ], [ 80.4472942, 7.3560975 ], [ 80.4487031, 7.3540737 ], [ 80.4501708 ], [ 80.457011, 7.3500262 ], [ 80.4590195, 7.3512512 ], [ 80.4597803, 7.352108 ] ] ] ]
      }
    }
  ]
}
```

\*Please note that there are two types in GeoJSON,

- **Polygon: an array of arrays of positions.**
- **MultiPolygon: a multidimensional array of positions**

## 1.5 Add coordinates of province



```
{  
  "type": "Polygon",  
  "coordinates": [  
    [[30.0, 10.0], [40.0, 40.0], [20.0, 40.0], [10.0, 20.0], [30.0, 10.0]]  
  ]  
}
```

It is a set of location points, GeoJSON uses the points to identify an area.

\* References :

<https://en.wikipedia.org/wiki/GeoJSON>

<https://geojson.org/>

**NOTE: You need to copy the information in square brackets and includes square brackets.**

# USER MANUAL

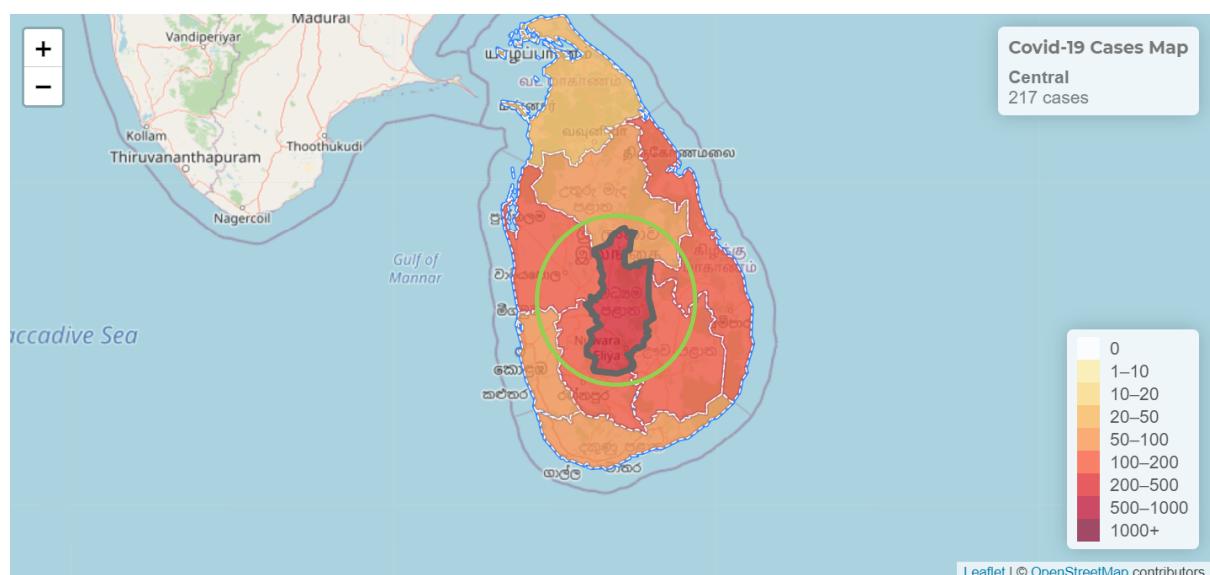
If you add it successfully then will show like this as below



## 1.6 Back to summary report page

### Summary Report

The overview of current COVID-19 situation of Sri Lanka



The area of the new province should be shown on the map.

# USER MANUAL

## 1.7 Units Setting

The units list can be followed by Kg, Box, Ton, Set, Person, Cars, Units and etc., you can also edit and delete it.

The screenshot shows a left sidebar with a blue background containing navigation links. A red starburst with the number '1' highlights the 'Units Setting' link. The main content area has a white background with a header featuring logos for UN ESCAP, DO, GISTDA, and ARTSA. A red starburst with the number '2' highlights the 'NEW UNIT' button. Below the button is a table listing units with columns for Show, Edit, and Destroy.

Show	Edit	Destroy
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>

### Editing Unit

Name

Des

Remark

**UPDATE UNIT**

[Show](#) | [Back](#)

Name

Kg	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Box	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Ton	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Set	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Person	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Cars	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Units	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>

# USER MANUAL

## 1.8 Living items Setting

The Living items list can be followed by Rice, Water, Egg, Meat, Milk, Vegetables Tissue and etc., you can also edit and dele it.

	Show	Edit	Destroy
Provinces Setting	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Units Setting	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Living Items Setting	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Medical Items Setting	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Edit Homepage	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Country Setting	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
>> Account <<	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Log out	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>

## New Livingitem

Name

Des

Remark

[CREATE LIVINGITEM](#)

[Back](#)

## Livingitems

Name	Show	Edit	Destroy
Rice	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Water	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Egg	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Meat	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Milk	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Vegetables	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>
Tissue	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Destroy</a>

[New Livingitem](#)

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## 1.9 Medical Items Setting

The Medical items list can be followed by Hospital Beds, Health Workers, Ventilators, ICU medical equipment, Negative Pressure Ambulances, Protective Suits, Masks and etc., you can also edit and dele it.

Name	Show	Edit	Destroy
Hospital Beds	Show	Edit	Destroy
Health Workers	Show	Edit	Destroy
Ventilators	Show	Edit	Destroy
ICU medical equipment	Show	Edit	Destroy
Negative Pressure Ambulances	Show	Edit	Destroy
Protective Suits	Show	Edit	Destroy
Masks	Show	Edit	Destroy

### New Medical Item

Name  
ICU medical equipment

Des

Remark

**CREATE MEDICALITEM**

[Back](#)

## Medical Items Management

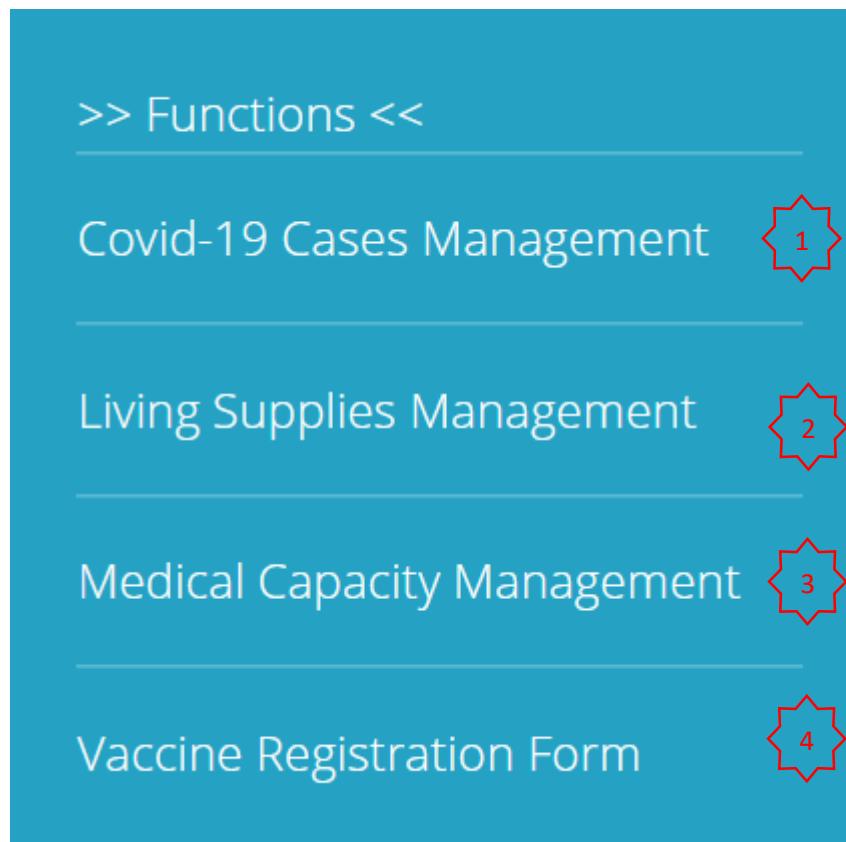
Name	Show	Edit	Destroy
Hospital Beds	Show	Edit	Destroy
Health Workers	Show	Edit	Destroy
Ventilators	Show	Edit	Destroy
ICU medical equipment	Show	Edit	Destroy
Negative Pressure Ambulances	Show	Edit	Destroy
Protective Suits	Show	Edit	Destroy
Masks	Show	Edit	Destroy

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## 2. Data Management

After successfully setting the units, then now you can add the data such as Covid-19 cases, Goods supplies, Medical supplies, Vaccine registration data and COVID-19 SIR model. All data for this training are simulated data.



# USER MANUAL

## 2.1 Covid-19 Cases Management

>> Functions <<

- Covid-19 Cases Management
- Living Supplies Management
- Medical Capacity Management
- Vaccine Registration Form

>> Settings <<

- Provinces Setting
- Units Setting
- Living Items Setting
- Medical Items Setting
- Edit Homepage

**Covid19cases**

[ADD NEW CASE](#)

← Previous 1 2 3 4 5 6 7 8 9 ... 141 142 Next →

Sex	Age	ID/Passport	Status	Show	Edit	Remove
Female	27	T0003606	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Female	39	T0003605	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Male	23	T0003604	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Female	34	T0003603	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Female	37	T0003602	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
Female	36	T0003601	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>

### New Covid-19 Case

Name	
Age	
Sex	
Nationality	
Quarantine province	
Notification date	2021
	July

**Covid19cases**

[ADD NEW CASE](#)

← Previous 1 2 3 4 5 6 7 8 9 ... 141 142 Next →

Case ID	Sex	Age	ID/Passport	Status	Show	Edit	Remove
4238	Female	27	T0003606	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4237	Female	39	T0003605	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4236	Male	23	T0003604	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4235	Female	34	T0003603	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4234	Female	37	T0003602	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4233	Female	36	T0003601	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4232	Male	27	T0003600	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>
4231	Female	33	T0003599	Hospitalized	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Remove</a>

## USER MANUAL

---

e.g., COVID-19 cases Information (Please leave it blank if not have information)

**Name:**

\* Age: 58  
\* Sex: Male  
\* Nationality: Thailand  
\* Quarantine province: Bangkok  
\* Notification date: 2021 12 July  
\* Announce date: 2021 13 July  
Onset province: Bangkok  
Onset district:  
\* Status: Hospitalized/Recovered/Deaths  
\* Id / passport T0003606

**Remark1**

**Remark2**

### New Covid-19 Case

Name	
Age	58
Sex	Male
Nationality	Thailand
Quarantine province	Bangkok
Notification date	2021
	July
	12

**NOTE: The fields marked (\*) must be completed in all cases.**

# USER MANUAL

## 2.2 Living (Goods) Supplies Management

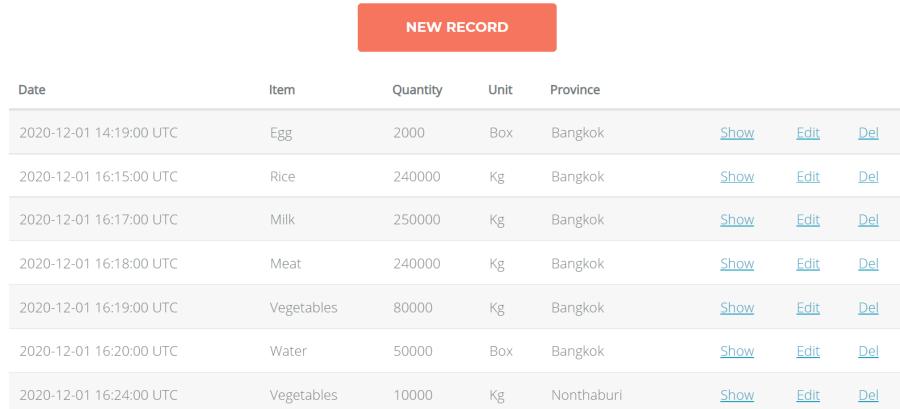


Date	Item	Quantity	Unit	Province	Show	Edit	Del
9:00 UTC	Egg	2000	Box	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
5:00 UTC	Rice	240000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
7:00 UTC	Milk	250000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
3:00 UTC	Meat	240000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
9:00 UTC	Vegetables	80000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
0:00 UTC	Water	50000	Box	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
4:00 UTC	Vegetables	10000	Kg	Nonthaburi	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
3:00 UTC	Egg	468	Box	Samut Prakan	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>

### New Living Supply Record

Date	2021
	July
	12
—	—
	06
:	—
	34
Item	
Quantity	

### Living Supplies Management



Date	Item	Quantity	Unit	Province	Show	Edit	Del
2020-12-01 14:19:00 UTC	Egg	2000	Box	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:15:00 UTC	Rice	240000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:17:00 UTC	Milk	250000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:18:00 UTC	Meat	240000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:19:00 UTC	Vegetables	80000	Kg	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:20:00 UTC	Water	50000	Box	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01 16:24:00 UTC	Vegetables	10000	Kg	Nonthaburi	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>

# USER MANUAL

---

e.g., Goods supplies (Please leave it blank if not have information)

\* Date: 2021 July 12

\* Item: Egg

\* Quantity: 2000

\* Unit: Box

\* Province: Bangkok

Remark

## Editing Living Supply

Date	2021
	July
	12
—	
	14
	:
	19
Item	Egg
Quantity	2000
Unit	Box
Province	Bangkok
Remark	
<input type="button" value="SUBMIT"/>	

**NOTE:** The fields marked (\*) must be completed in all cases.

# USER MANUAL

## 2.3 Medical Supplies Management

The screenshot shows a left sidebar with navigation links and a main content area titled "Medical Capacity Management". The sidebar includes links for Covid-19 Cases Management, Living Supplies Management, Medical Capacity Management (highlighted with a yellow starburst), Vaccine Registration Form, Provinces Setting, Units Setting, Living Items Setting, and Medical Items Setting. The main content area has a title "Medical Capacity Management" and a red button "NEW MEDICAL CAPACITY RECORD". Below it is a table with columns: Item, Quantity, Unit, Province, and actions (Show, Edit, Del). The table contains 8 rows of data.

	Item	Quantity	Unit	Province	Show	Edit	Del
1-01	Hospital Beds	6000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	Health Workers	10000	Person	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	Ventilators	25	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	ICU medical equipment	3000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	Negative Pressure Ambulances	100	Cars	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	Protective Suits	400000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2-01	Masks	800000	Units	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>

The screenshot shows a form titled "New Medical Capacity Record". It has fields for Date (with dropdowns for Year, Month, and Day), Item (text input), Quantity (text input), Unit (text input), Province (text input), and Remark (text area). A "SUBMIT" button is at the bottom.

The screenshot shows the "Medical Capacity Management" page again. The table now includes 10 rows of data, with the last two rows being the newly added records from the previous screenshot. The "NEW MEDICAL CAPACITY RECORD" button is visible at the top of the table.

	Item	Quantity	Unit	Province	Show	Edit	Del
2020-12-01	Hospital Beds	6000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Health Workers	10000	Person	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Ventilators	25	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	ICU medical equipment	3000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Negative Pressure Ambulances	100	Cars	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Protective Suits	400000	Set	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Masks	800000	Units	Bangkok	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
2020-12-01	Health Workers	2250	Person	Samut Prakan	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>

## USER MANUAL

---

e.g., Medical supplies (Please leave it blank if not have information)

**\*Date:** 2021 July 12  
**\*Item:** ICU medical equipment  
**\*Quantity:** 3000  
**\*Unit:** Set  
**\*Province:** Bangkok

**Remark:**

### Editing Medical Capacity Record

Date	2020
	July
	12
Item	ICU medical equipment
Quantity	3000
Unit	Set
Province	Bangkok
Remark	

**SUBMIT**

**NOTE:** The fields marked (\*) must be completed in all cases.

# USER MANUAL

## 2.4 Vaccine Registration Management

The screenshot shows a software interface titled "Vaccine Registration Management". On the left, there is a sidebar with the following menu items:

- Medical Capacity Management
- Vaccine Registration Form 1
- >> Settings <<
- Provinces Setting
- Units Setting
- Living Items Setting
- Medical Items Setting

The main area is titled "Vaccine Registration Records" and displays a table with the following data:

First Name	Last Name	Gender	Email	Phone	Show	Edit	Del
Jie lun	Zhou	Female	1234567@mail.com	0998888888	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
Ling	Kun	Male	7654321@mail.com	0999999999	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
Jie lun	Zhou		1234567@mail.com	0998888888	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>
Ling	Kun		7654321@mail.com	0999999999	<a href="#">Show</a>	<a href="#">Edit</a>	<a href="#">Del</a>

[New Vaccinereg](#) 2

For example, for testing purposes you can use a simulated database implementation.

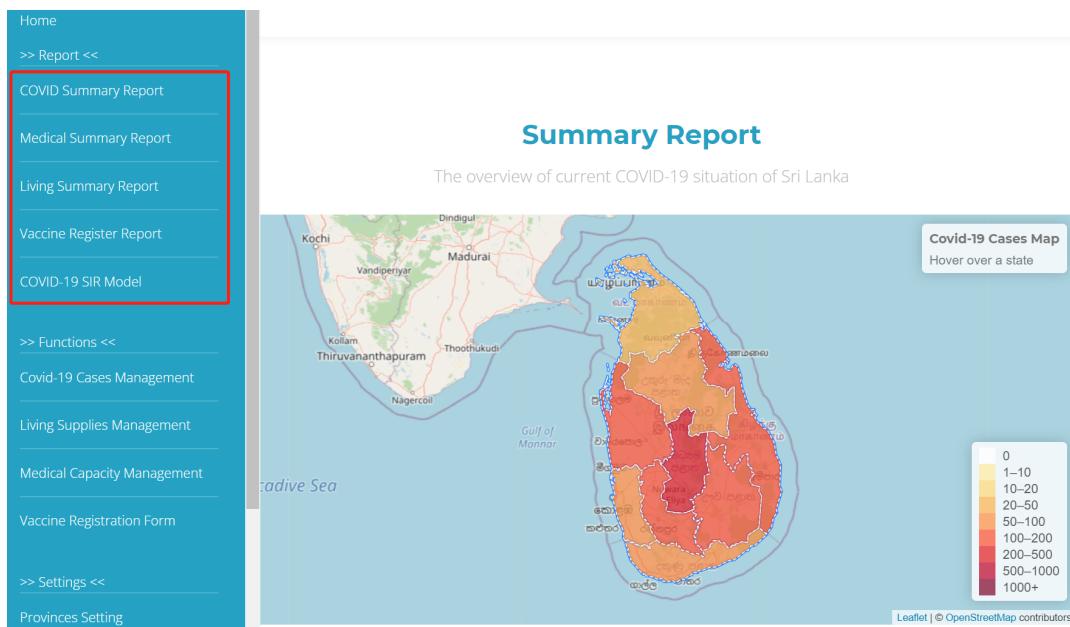
The screenshot shows a "New Vaccinereg" form with the following fields:

- First Name:
- Last Name:
- ID / Passport:
- Birthday:  
Year: 2021  
Month: July  
Day: 6
- Gender:
- Email:
- Phone:
- Country:
- Province:
- City:

# USER MANUAL

## 3. GIPC Dashboard

Congratulations! You almost done for this training, and let's try to give the overview from GIPC. You can view summary of report includes pandemic situation, goods supplies, medical supplies, vaccine distribution and COVID-19 SIR model.

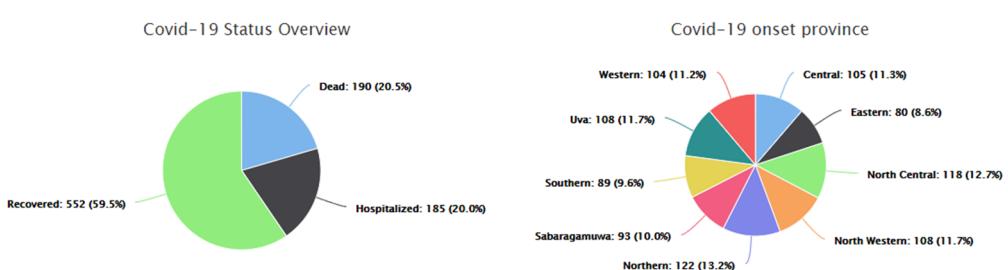
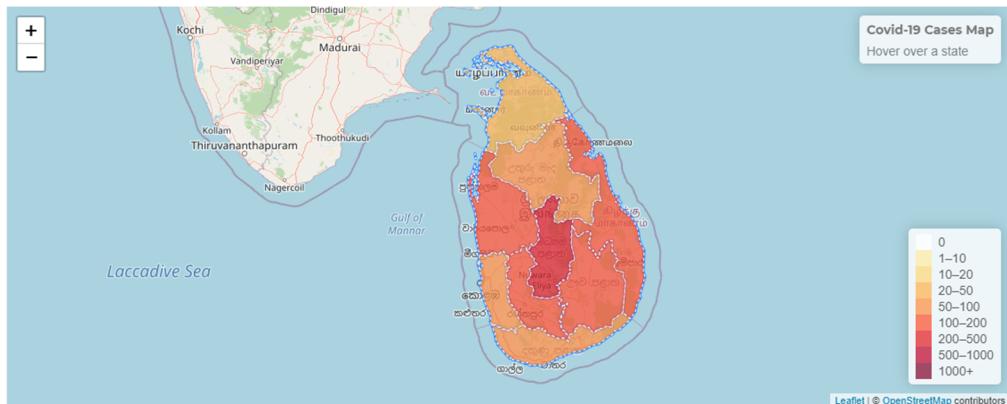


# USER MANUAL

You also can view by this interactive map.

## Summary Report

The overview of current COVID-19 situation of Sri Lanka

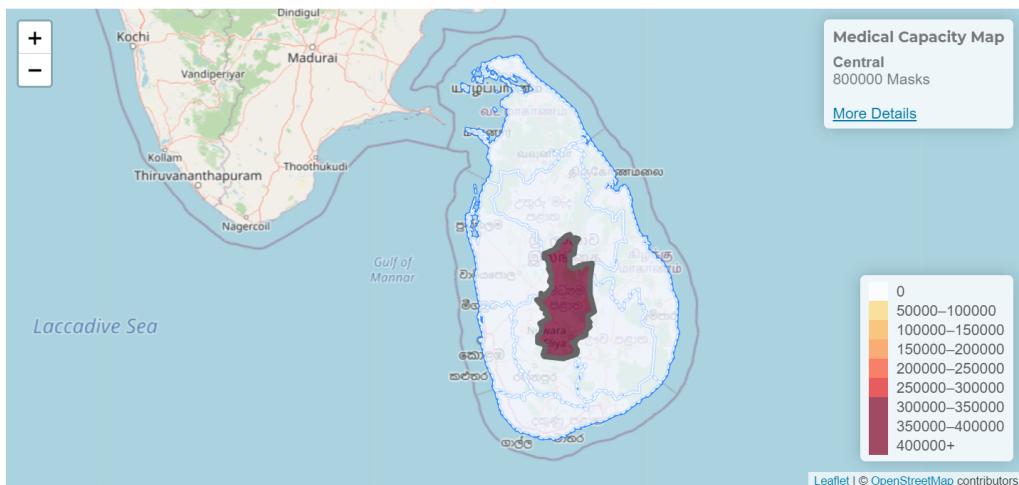


## Data Analysis Dashboard

# USER MANUAL

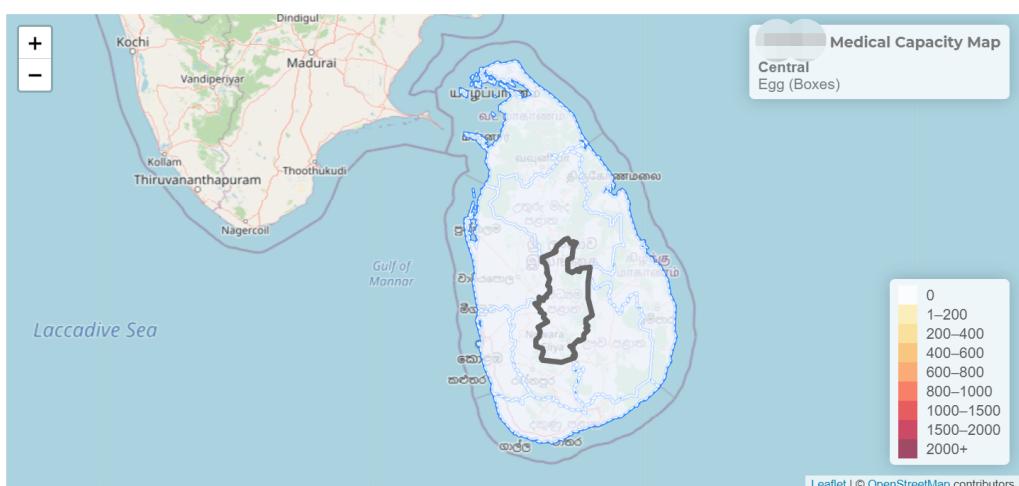
## Sri Lanka Medical Capacity Summary Report

The overview of current medical capacity summary of Sri Lanka



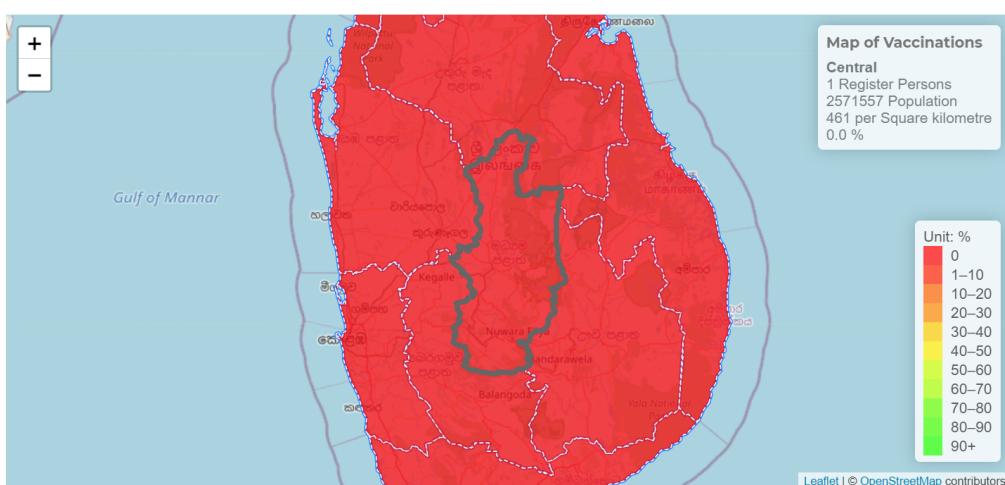
## Sri Lanka Living Supply Summary Report

The overview of current living supply summary of Sri Lanka



## Sri Lanka COVID Vaccine Register Summary Report

The overview of current vaccine register summary of Sri Lanka



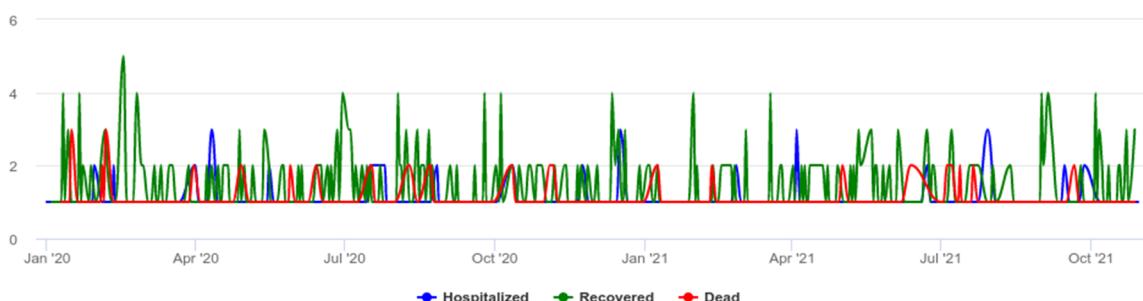
# USER MANUAL

- ❖ **COVID-19 Spatiotemporal Analysis and Prediction Base on GIPC**
  - Consider pandemic spread by contact with infected individuals.
  - Individuals recover from the pandemic and gain further immunity from it.

## Susceptible - Infected - Recovered (SIR) Model

The SIR Model of current COVID-19 situation of Sri Lanka

Covid-19 Pandemic Timeline



### Initial Condition of SIR Model

Start Date: 08 / 01 / 2021

End Date: 08 / 31 / 2021

Province :

Central - P:2571557

Susceptible :

500000

Beta ( $\beta$ ) :

0.6

Gamma ( $\gamma$ ) :

0.2

\* Beta is Infectious rate per day

\* Gamma is the Recovery rate

Lambda ( $\lambda$ ) :

0.2

Delta ( $\Delta$ ) :

0.001

\* Lambda is the rate of movement from exposed to infectious per day

\* Delta is the rate of death for those who enter an infectious state

Time to simulate:

150

days

**SUBMIT & ANALYZE**

# USER MANUAL

**Susceptibles (S) have no immunity from the disease.**

**Infecteds (I) have the disease and can spread it to others.**

**Recovereds (R) have recovered from the disease and are immune to further infection.** 5



LOGOUT

## Susceptible - Infected - Recovered (SIR) Model

The SIR Model of current COVID-19 situation of Sri Lanka

Selected Start Date: 2021-08-01

Selected End Date: 2021-08-31

Province: Central

Population: 2571557

Susceptible: 500000

Infected: 3

Recovered: 2

Dead: 1

Beta ( $\beta$ ) : 0.6

\* Beta is Infectious rate per day

Gamma ( $\gamma$ ) : 0.2

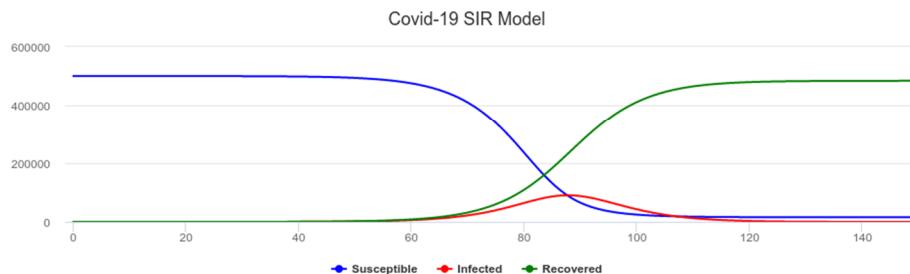
\* Gamma is the Recovery rate

Lambda ( $\lambda$ ) : 0.6

\* Lambda is the rate of movement from exposed to infectious per day

Delta ( $\delta$ ) : 0.2

\* Delta is the rate of death for those who enter an infectious state



📞 (000) 000-0000

✉️ information@untitled.tld

📍 123 Somewhere Road, Nashville, TN 00000

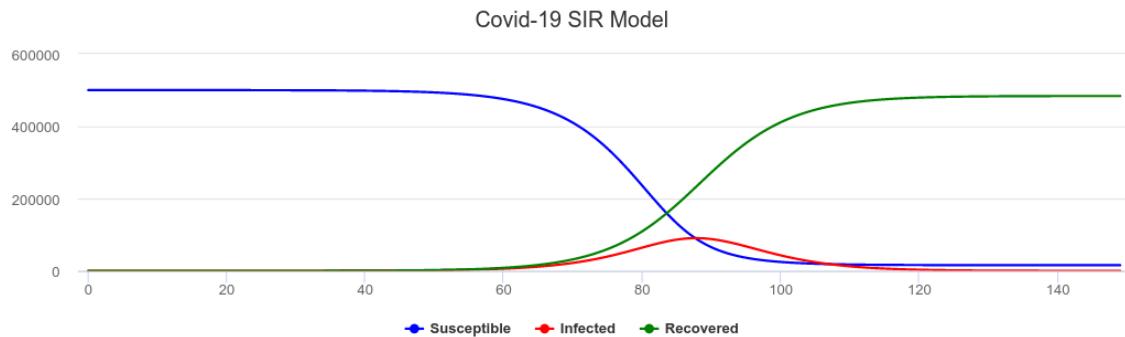
© GISTDA 2020.

# USER MANUAL

## Susceptible - Infected - Recovered (SIR) Model

The SIR Model of current COVID-19 situation of Sri Lanka

Selected Start Date: 2021-08-01	Selected End Date: 2021-08-31		
Province: Central	Population: 2571557		
Susceptible: 500000	Infected: 3	Recovered: 2	Dead: 1
Beta ( $\beta$ ) : 0.6 <i>* Beta is Infectious rate per day</i>		Gamma ( $\gamma$ ) : 0.2 <i>* Gamma is the Recovery rate</i>	
Lambda ( $\lambda$ ) : 0.6 <i>* Lambda is the rate of movement from exposed to infectious per day</i>		Delta ( $\Delta$ ) : 0.2 <i>* Delta is the rate of death for those who enter an infectious state</i>	



# USER MANUAL

**Initial Condition of SIR Model**

Start Date:  End Date:

Province :  Susceptible :

Beta ( $\beta$ ) :  Gamma ( $\gamma$ ) :

\* Beta is Infectious rate per day \* Gamma is the Recovery rate

Lambda ( $\lambda$ ) :  Delta ( $\Delta$ ) :

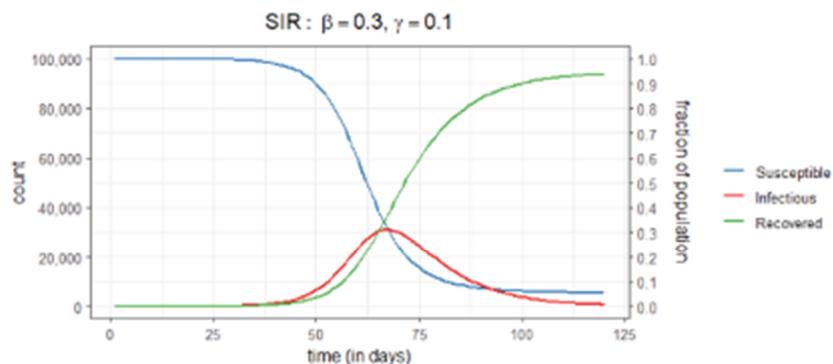
\* Lambda is the rate of movement from exposed to infectious per day \* Delta is the rate of death for those who enter an infectious state

Time to simulate:  
 days

**SUBMIT & ANALYZE**

**In the real world, differential equations and their solvers would be used and you're free to explore that if you wish. Enjoy and let's talk about this online!**

At this point in the pandemic, you may have seen the usual graphical output from a SIR model that shows the number (or proportion) of people in each state over time



These curves come from the (continuous time) SIR model which specifies a set of three ordinary differential equations:

$$\frac{dS_t}{dt} = -\frac{\beta I_t S_t}{N}, \quad \frac{dI_t}{dt} = \frac{\beta I_t S_t}{N} - \gamma I_t, \quad \frac{dR_t}{dt} = \gamma I_t$$