LAKE TOBA TOURISM DEVELOPMENT
INVESTMENT OPPORTUNITIES

Badan Pelaksana Otorita Danau Toba
INDONESIA 10 PRIORITY DESTINATIONS

LAKE TOBA  
Tanjung Kelayang  
Borobudur  
Wakatobi  
Morotai

Tanjung Lesung  
Kep. Seribu & Kota Tua  
Bromo Tengger Semeru  
Mandalika  
Labuan Bajo

Tourism Authority  
Tourism Special Economic Zone (SEZ)  
National Strategic Tourism Zone
North Sumatra

North Sumatra is the 7th biggest province by regional GDP. It has 14M with a growth rate at ~1.8% per year. Income per capita is around IDR 44M per year. Employment rate is at 70% with a low minimum wage level of under IDR 2M per month.

**Highlights of LAKE TOBA**

- Lake Toba is one of the four special priority destinations assigned by the Government.
- The largest volcanic lake in the world and the second largest lake in the world after Victoria Lake in Africa.
- One out of ten deepest lake in the world, reaching around 500 meters deep.

The distinctive geographical of Lake Toba reserves a number of economic potentials for the benefit of the wide range of communities, especially as a source of bountiful fresh water and lust tropical forest which attract the interest of big industries to invest in the areas.

Key Tourism Areas:
- Parapat (Girsang Sipangan Bolon) in Simalungun Regency
- Samosir Island (Simanindo & Pangururan) in Samosir Regency
- Balige in Toba Samosir Regency
Lake Toba Tourism Authority, established based on Presidential Decree 49 of 2016, is a professionally-managed Public Service Agency that synchronizes and coordinates all stakeholder associated with investments and businesses in the tourism industry including the Local Government, Central Government and Community in order to reach the target of 1 million international tourist visitors in 2019.

The Lake Toba Tourism Authority has the following tasks:

1. **To Facilitate** Coordination, Synchronization, Planning and Development of Lake Toba Tourism Destination
2. **To Conduct** Planning, Development, and Management within Designated Development Area
3. **To Promote** tourism in Lake Toba

**ADVISORY BOARD (13 Ministers + 1 Governor)**
Chairman: Coordinating Minister for Maritime Affairs
Chairman of Daily Executive: Minister of Tourism

**EXECUTING BOARD**
Resort Concept that incorporate nature, culture and technology into an Integrated Eco Resort.

The resort is aimed not only to celebrate its majestic nature, but also to elevate local communities and to rebrand the local wisdom, history, and culture of Lake Toba.

It also initiates a cutting-edge, engaging educational experience on the history of Lake Toba, a massive caldera created by a supervolcanic eruption 1.2 million years ago; together with its culturally rich communities that live around lake toba.
Lake Toba Investment Plan:
TOBA CALDERA RESORT

Located on top of a valley with a total authorized area of ±500 Ha and development area of ± 386.72 Ha, Sibisa is the key region to be developed by the Lake Toba Tourism Authority. The site overlooks the vast Lake Toba and Samosir Island in the front, as well as Bukit Barisan mountain range in the back.

<table>
<thead>
<tr>
<th>Development Site Breakdown</th>
<th>Area (Ha)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitality</td>
<td>121.67</td>
<td>31.46%</td>
</tr>
<tr>
<td>MICE</td>
<td>2.72</td>
<td>0.70%</td>
</tr>
<tr>
<td>Commercial</td>
<td>8.36</td>
<td>2.16%</td>
</tr>
<tr>
<td>UMKM Centre</td>
<td>0.9</td>
<td>0.23%</td>
</tr>
<tr>
<td>Geo Cultural Park</td>
<td>9.78</td>
<td>2.53%</td>
</tr>
<tr>
<td>Cultural Centre</td>
<td>1.35</td>
<td>0.35%</td>
</tr>
<tr>
<td>Supporting Facilities</td>
<td>2.06</td>
<td>0.53%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>1.66</td>
<td>0.43%</td>
</tr>
<tr>
<td>Botanical Garden</td>
<td>14.54</td>
<td>3.76%</td>
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<tr>
<td>Agro Farm</td>
<td>21.47</td>
<td>5.55%</td>
</tr>
<tr>
<td>Sustainable Golf</td>
<td>71.53</td>
<td>18.50%</td>
</tr>
<tr>
<td>Back Of House</td>
<td>3.25</td>
<td>0.84%</td>
</tr>
<tr>
<td>Green Space</td>
<td>127.43</td>
<td>32.95%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>386.72</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Lake Toba Investment Plan:

TOBA CALDERA RESORT

map detail

Legenda

- Hospitality
- MICE
- Commercial
- UMKM Centre
- Geo Cultural Park
- Culture Centre
- Supporting Facilities
- Healthcare
- Botanical Garden
- Agro Farm
- Golf Area
- Back of House
- Green Space
- District Gateway
To create a unique ecofriendly and sustainable tourism destination in Toba that develops and empowers local communities by integrating technology, diversity, and innovation.

**Eco Friendly**
- Nature & Adventure
- Agro & Sustainability
  - Green Activities
    - Education
    - No Plastics
    - Pollution Control
    - Alternative Energy

**Community Focused**
- Education & Training
- Community Engagement
- Health & Medical
- Cultural Shows
- Local Products

**Geo-Park**
- UNESCO
- Education & Mice
- First In Indonesia
- Best In Asia
- International Exposure
- 3D Mapping Shows
- Memorable Experiences
Masterplan Concept
TOBA CALDERA RESORT

Natural Tourism
Marvelous geological attraction at one of the greatest supervolcano on earth

Heritage Tourism
Heartwarming Batak culture & historical pilgrimage at the heart of North Sumatera

Leisure Tourism
Vibrant and lively creative-villages that enliven the local economy

Community Tourism
Serene retreating resorts and lakeside delights at the natural wonder of Toba Highland
VILLA
NR1: 10.75 Ha, NR2: 10.2 Ha, NR3: 9.18 Ha
NR4: 12.94 Ha, NR5: 9.6 Ha

HOTEL
CV1: 6.62 Ha, CV2: 6.82 Ha, CV3: 5.71 Ha

VILLA
SR1: 6.13 Ha, SR2: 6.71 Ha, SR3: 5.42 Ha
SR4: 5.83 Ha, SR5: 7.51 Ha, SR6: 7.59 Ha
SR7: 6.44 Ha
GREEN DESTINATION

BOTANICAL GARDEN NR6: 15.55 Ha

FARMHOUSE CV14: 32 Ha

GOLF COURSE SR9: 71.53 Ha

Legend:
- Hospitality
- MICE
- Commercial
- Geo Cultural Park
- Supporting Facilities
- Healthcare
- UMKM
- Green Space
- Botanical Garden
- Agrofarm
- Golf Area
- Back of House
- Culture House
- Set Back 60 m
- Set Back 20 m (Public Space)
COMMERCIAL
CV4: 1.79 Ha
CV6: 3.35 Ha
CV7: 1.30 Ha
UMKM
CV15: 0.9 Ha

F&B
SR8: 0.84 Ha
GEO CULTURAL PARK

CV 5: 10.95 Ha
CV 12: 1.35 Ha

Legenda
- Hospitality
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- Agrofarm
- Golf Area
- Back of House
- Culture Center
- Set Back 60 m
- Set Back 20 m (Public Space)
HEALTHCARE

CV 11: 1.66 Ha

Legenda

- Hospitality
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- Healthcare
- UMKM centre
- Green Space
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- Agrofarm
- Golf Area
- Back of House
- Culture Center

- Set Back 60 m
- Set Back 20 m (Public Space)
INITIAL INFRASTRUCTURE STUDY
Initial Infrastructure Study
TOBA CALDERA RESORT

RENCANA
PENGEMBANGAN KAWASAN WISATA
DANAU TOBA
Desa Pardamean Sibisa, Desa Motung, dan Desa Sigapiton
Kecamatan Aijbata, Kabupaten Toba Samosir,
Provinsi Sumatera Utara

UTARA
SKALA 1 : 25000

SISTEM KOORDINAT REFERENSI:
PROYEKSI : Universal Transverse Mercator (UTM)
SISTEM GRID : GRID UTM
DATUM : World Geodetic System 1984 (WGS 84)
ZONA : UTARA 4,7

LEGENDA :
RENCANA BACK OF HOUSE
RENCANA RUANG TERBUKA HIJAU
PATOK / BENCHMARK
BATAS DESA
JALAN EKSIDING (Mobil)
BATAS LAHAN BPODT
Initial Infrastructure Study
TOBA CALDERA RESORT

Water Supply Infrastructure Concept

Water Demand
North Ridge: 35 liter/second
Central Village: 28 liter/second
South Ridge: 27 liter/second

Water Sources
Lumban Siahaan Spring (36 l/sec), Lumban Manurung Spring (20 l/sec), Simarnaung Spring (25 l/sec)
Motung Check Dam

Transmission
Pumping is needed to take water from Lumban Siahaan Spring, Lumban Manurung Spring, and Motung Check Dam. Transmission with gravitation is possible for Simarnaung Spring.

Distribution
1. Main pipe that convey water from WTP to Reservoir
2. Main Reservoir equipped with booster pump, and distribution reservoir
3. Primary, Secondary, Tertiary, and Reticulation Pipe that distribute water to each service block.

Production
Phase 1: Water Treatment Plant is planned to be built in Central Village. The WTP will treat water from Lumban Siahaan Spring. To accommodate the increasing water demand in the next phases, the WTP will be modular and its capacity will be easily increased.
Phase 3: Water from Motung Check Dam will be used. 2nd WTP is planned to be built in North Ridge.
Initial Infrastructure Study
TOBA CALDERA RESORT

Waste Water Supply Infrastructure Concept

Phase 1
Both off-site and on-site system will be utilized. Centralized wastewater treatment plant and sewerage system will be built and operated first in Central Village. On-site system will be applied in Botanical Garden North Ridge and Luxury Villa and also Glam Camp in South Ridge.

Phase 2
Another centralized WWTP will be built for North Ridge and South Ridge. The capacity of WWTP in Central Village will be increased.

Phase 3
All zone will be serviced by centralized system. On-site WWTP in South Ridge will be connected to centralized system.
Initial Infrastructure Study
TOBA CALDERA RESORT

Drainage Infrastructure Concept

Drainage system in resorts area is Bioretention Swale
Swale drainage have certain characteristics that made water retention and infiltration possible, thus minimizing rainwater run-off that will flow to receiving water body. The flow within drainage channel will follow resorts area’s topographical condition. The design of drainage system is based on 25 years return period rainwater intensity value with maximum intensity of 217 mm/hour.

Swale Drainage
Initial Infrastructure Study
TOBA CALDERA RESORT

Solid Waste Infrastructure Concept

Waste Generation
Total waste generation in resorts area is around 38 m3/day or around 12 ton/day.

Indirect System
Solid wastes that are generated from every activities in resorts area will be processed in intermediate treatment facility (ITF) within the resorts area. Organic wastes will be composted, and recyclable waste will be recycled. Only refused waste will be transported and dumped to landfill in Toba Samosir Regency.

Collection and Transportation Facility
Each building will have temporary waste container. Waste from each temporary container will be transported by truck with capacity of 3 – 6 m3. Wastes from the roadside will be transported using motorcycle with capacity of 1 – 1,5 m3. The wastes then will go to ITF for further treatment.

Phase 1
- 13,6 m3/day
- 4,1 ton/day
- 1 ITF
- 2 motor sampah
- 1 truk sampah

Phase 2
- 17,4 m3/day
- 5,2 ton/day
- 3 motor sampah
- 2 truk sampah

Phase 3
- 7 m3/day
- 2,1 ton/day
- 4 motor sampah
- 3 truk sampah
Power Demand
Total Power Demand is 45.68 MW. The power demand in Central Village is 18.95 MW, North Ridge 18.04 MW, and South Ridge 8.68 MW.

Electricity Network System
The main power source is planned to be drawn from PLN’s main substation through 150 kV distribution system. The electricity is then received by substation within resorts area. The voltage will be reduced from 150 kV to 20 kV and then distributed to distribution station.

Emergency Power Source
Diesel Generator Set is used as emergency power source and will be provided in each building with 380/220 Volt to Low Voltage Main Distribution Panel (PDUTR). Genset is also located in each power house that are scattered in various places within resorts area.

Distribution Network System
Power is distributed with voltage of 380/220 Volt, 50 Hz to branch panels that are divider panels. The power then will be distributed from divider panel to every sub panels. Maximum drop voltage from load center to the farthest load point is calculated to be 5%.

Lightning Protection and Grounding System that consists of External Protection, Internal Protection, Grounding System, and Open Area Lightning Rod.
ICT System For Telephone Communication And Data Communication
ICT technology in one system that consist of:
1. Network Backbone – LAN
2. Resorts area web portal, and
3. Application program module
The network is planned to use fiber optic cable.

ICT Network Backbone
ICT Network backbone consists of LAN, Data Center, Backbone Optic and network inside or outside of building that consists of passive components (copper cable and fiber optic), and also active components (switch, router, hub) that will be arranged according to IT blue print that is provided by IT service provider in resorts area. It is estimated that 1,220 lines of cable network and fibre optics are needed.

Telephone Communication System
PABX (Private Branch Exchange) or extension is private network. In PABX, several line of PSTN from Telkom are further divided to private lines in a building. It is estimated that 1,220 line are needed for automatic central telephone connection in resorts area.