



**ANNUAL REPORT ON
MONITORING OF GLACIAL LAKES & WATER BODIES IN THE
HIMALAYAN REGION OF INDIAN RIVER BASINS
UNDERTAKEN BY CWC DURING 2024**

**CENTRAL WATER COMMISSION
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION**

Annual Report on Monitoring of Glacial Lakes & Water Bodies in the Himalayan Region of Indian River Basins undertaken by CWC during 2024



**Morphology & Climate Change Directorate
Planning & Development Organisation
Central Water Commission
Department of Water Resources, River Development &
Ganga Rejuvenation
Ministry of Jal Shakti, New Delhi**

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10.	Abstract (with Keywords): CWC monitors 902 Glacial Lakes & Water Bodies in the Himalayan region and Tibetan region, draining to India on monthly basis – June to Oct, every year, using Remote Sensing Data. The summary of monthly monitoring of 902 Glacial Lakes & Water Bodies during 2024, analysis on changes in water spread area with reference to the base data of first monthly data of 2024, and identification of glacial lake cascades associated with the glacial lakes located in India are presented in the report. Keywords: Glacial Lake, Water Bodies, Indian Himalayan Region, Satellite Images, Remote Sensing, Google Earth Engine.				

FOREWORD



The Himalayas are an abode to many glaciers and glacial lakes with vast tracts of snow cover. Rapid accumulation of water in the glacial lakes, particularly in those adjacent to receding glaciers, can lead to a sudden breach of their unstable moraine dams. The resultant high peak flood discharges by the dam failure called Glacial Lake Outburst Flood (GLOF) has catastrophic effects downstream of the lakes along the river stretch. Hence, monitoring of these glacial lakes has become a necessity in management & mitigation of disaster risk and climate change impact assessment.

Monitoring of Glacial Lakes/Water Bodies (GLs/WBs) using remote sensing technique was taken up by CWC, DoWR, RD&DR, Ministry of Jal Shakti, during XI Plan period in the year 2009 under DWRIS Plan scheme. Monitoring of 477 GLs/WBs of size more than 50 ha (from Glacial Lake Inventory 2011) for change in water spread area, was carried out during monsoon months (June to October) every year since 2011. The monitoring activity was initiated in NRSC in the year 2011 which continued till 2015. CWC has taken up monitoring during 2016 and the work was done by downloading and manually digitising Advanced Wide Field Sensor (AWIFS) Satellite imageries procured/ downloaded from NRSC and processing them in Arc GIS. This continued till 2021. From 2022, monitoring of additional 425 GLs having size of 10ha to 50ha was also included. This includes 385 Glacial Lakes of water spread area between 10-50 Ha from Glacial Lake Inventory 2011 and 40 high priority Glacial Lakes identified by Swiss Agency for Development and Cooperation (SDC) for NDMA. CWC is presently monitoring a total of 902 GLs/WBs. High resolution multi-spectral and microwave (SAR) images of foreign satellites at 10 m resolution have been processed and analysed in open-source cloud computing platform, Google Earth Engine, using automatic algorithm which CWC has been developed in-house. Visual inspections & manual digitisation were carried out to supplement the automatic algorithm to complete the task.

The Annual Monitoring Report 2024 is the compilation of abstract of the monthly monitoring reports of June to October 2024, and the analysis on changes in water spread area with reference to the base data of first monthly data of 2024 and identification of glacial lake cascades associated with the glacial lakes located in India. The lake-wise details are systematically documented at State/UT level for Indian region whereas those for transboundary region have been documented separately.

The report forms a useful reference data for GLOF risk assessment and long-term climate impact analysis.

I hope that document will be useful to the officers and scientists of Central/State water resources, environmental & disaster management Organisations and to those who particularly have a flair for the subject. Suggestions, if any, are always welcome for improvement of future reports.

New Delhi
January, 2025

(A.S. GOEL)
Member (RM), CWC

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ABBREVIATIONS	
AR	Arunachal Pradesh
CWC	Central Water Commission
DoWR, RD & GR	Department of Water Resources, River Development & Ganga Rejuvenation
DWRIS	Development of Water Resources Information System
GEE	Google Earth Engine
GL(s)	Glacial Lake(s)
GLOF	Glacial Lake Outburst Flood
FCC	False Color Composite
ha	Hectare
HP	Himachal Pradesh
J&K	Jammu & Kashmir
LAT	Latitude
LONG	Longitude
LU/LC	Land Use /Land Cover
NDWI	Normalized Difference Water Index
NDMA	National Disaster Management Authority
NIR	Near-Infrared
NRSC	National Remote Sensing Centre
SAR	Synthetic Aperture Radar
SDC	Swiss Agency for Development and Cooperation
SK	Sikkim
TAR	Tibet Autonomous Region
UID	Unique Identification
UK	Uttarakhand
WB(s)	Water Body(ies)

Executive Summary

The Himalayan Region (HR) is facing important challenges in coping with the adverse effects of climate change. Physically, the shrinking of mountain glaciers and expansion of Glacial Lakes are amongst the most recognizable and dynamic impacts of climate warming in this environment. In combination with this, altered stability of surrounding rock and ice walls, the potential threat from Glacial Lake Outburst Flood (GLOF) is evolving over time. Therefore, under such changing environment, a close watch on the relative change in water spread area of even smaller lakes has become very crucial in this region.

Analysis of worldwide literature on the outburst of glacial lakes and the field and theoretical experience have led to the conclusion that it is not feasible to make a reliable prediction of a specific occurrence on the basis of our existing knowledge. As direct predictions cannot be made, there is an urgent need to monitor a careful selection of prioritized lakes on a regular basis. This should be carried out in collaboration with other institutions, both nationally and internationally.

The work of monitoring of Glacial Lakes/Water Bodies (GLs/WBs) using remote sensing technique was taken up by CWC, DoWR, RD&DR, Ministry of Jal Shakti, during XI Plan period in the year 2009 under DWRIS Plan scheme. The inventory of GLs/WBs was published in June, 2011 in association with National Remote Sensing Centre (NRSC), Hyderabad based on the satellite data of Advanced Wide Field Sensor (AWiFS) of the Indian Remote Sensing Satellite, Resourcesat-2 collected from May-Nov, 2009. This inventory is therefore hereafter referred as *Inventory of Glacial Lakes & Water Bodies (2011)*. As per this inventory, there are 2028 GLs/WBs with size more than 10 ha in the Himalayan Region draining towards India. The country wise & basin wise details of the inventory are given in **Table ES.1**.

Table ES.1: Country wise & Basin wise Distribution of Glacial lakes and Water bodies above 10 Ha(in Nos.)

Country-wise Distribution				Basin-wise Distribution			
Country	Glacial Lakes (>10 Ha)	Water Bodies (>10 Ha)	Total (>10 Ha)	Basin Name	Glacial Lakes	Water Bodies	Total
India	60	448	508	Brahmaputra	294	1099	1393
Bhutan	77	124	201	Ganga	178	105	283
Nepal	57	45	102	Indus	31	321	352
China	309	904	1213	Total	503	1525	2028
Myanmar	-	4	4				
Total	503	1525	2028				

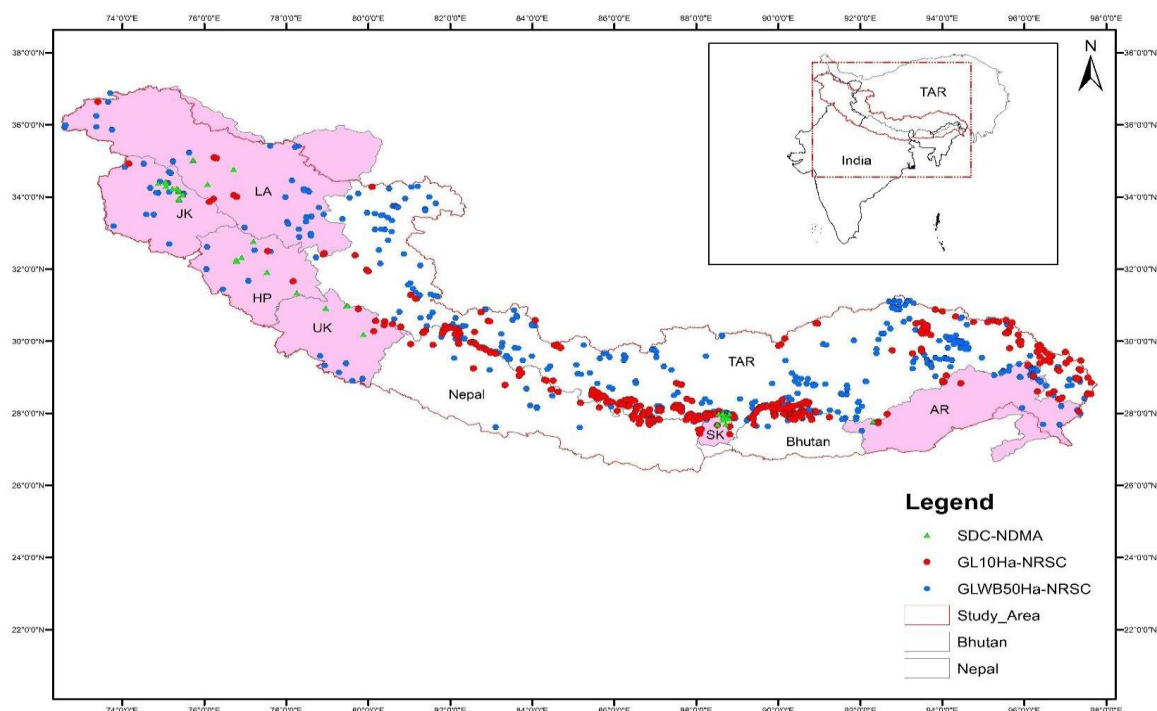
Monitoring of 477 GLs/WBs with size more than 50 ha, sourced from Glacial Lake Inventory 2011, for change in water spread area, was carried out during monsoon season (June to October) every year since 2011. The monitoring activity initiated in NRSC was continued till 2015. CWC has taken up monitoring during 2016 and the work was undertaken by downloading and manually digitising Advanced Wide Field Sensor (AWiFS) Satellite imageries procured/ downloaded from NRSC and processing them in Arc GIS. This continued till 2021. From 2022, monitoring of additional 425 GLs with sizes of 10ha to 50ha was also included. This includes 385 Glacial Lakes with water spread area between 10-50 Ha from Glacial Lake Inventory (2011) and 40 high priority Glacial Lakes identified by Swiss Agency for Development and Cooperation (SDC) for NDMA. Thus, currently CWC is monitoring a total of 902 GLs/WBs. High resolution multi-spectral and microwave (SAR) images of foreign satellites at 10 m resolution have been processed

and analysed in open-source cloud computing platform Google Earth Engine using automatic algorithm which has been developed in-house. Visual inspection & manual digitisation has been used to supplement the automatic algorithm to complete the task. The Monthly Monitoring Report is shared with all stakeholders through email for further necessary action. The reports are also e-published on CWC website for any time access by the concerned (<https://cwc.gov.in/glacial-lakeswater-bodies-himalayan-region>). The abstract of 902 GL/WB is given in **Table ES.2**.

Table ES.2: Abstract of 902 GLs/WBs

Country/ Area	State/ Union Territory	No of Glacial Lakes				No of Water Bodies				Grand Total
		Indus Basin	Ganga Basin	Brahma- putra Basin	Total	Indus Basin	Ganga Basin	Brahma- putra Basin	Total	
India	Ladakh	15	0	0	15	26	0	0	26	41
	Jammu & Kashmir	15	0	0	15	16	0	0	16	31
	Himachal Pradesh	10	0	0	10	5	0	0	5	15
	Uttarakhand	0	9	0	9	0	6	0	6	15
	Sikkim	0	0	42	42	0	0	1	1	42
	Arunachal Pradesh	0	0	9	9	0	0	25	25	35
	Total	40	9	51	100	47	6	26	79	179
	India Total	100				79				179
Transboundary	China	12	110	187	309	49	19	191	259	568
	Bhutan	0	0	71	71	0	0	11	11	82
	Nepal	0	64	0	64	0	9	0	9	73
	Total	12	174	258	444	49	28	202	279	723
	Transboundary Total	444				279				723
Grand Total		544				358				902

Map of Study Area showing Glacial Lakes and Water Bodies being monitored by CWC



Limitations and Assumptions:

Limitations:

- Glacial lake identification can be done either using visual interpretation or automatic mapping methods. The automatic mapping procedures have limitations due to varying terrain conditions such as lakes situated in the shadow portions of mountains, presence of snow cover, cloud cover, lakes being partly frozen, etc. As lake water absorbs the incident radiation making it appear in darker tone and colour in the standard FCC of satellite data, similar response also prevails over shadow region of clouds or mountains on surface, which may lead to incorrect mapping. Moreover, a mountain shadow covering a lake partly/completely within its vicinity, also makes it difficult to accurately map the lake boundary.
- A few Glacial lakes could not be mapped owing to the constraints such as Glacial lakes being under frozen condition, presence of snow or cloud cover over the lakes, lakes under mountain shadow or lakes in dried up condition.

Assumptions:

- Inclusion or exclusion of water pixels near lake boundaries depending on more than or less than certain fraction of its area falling within the lake boundary.

This document presents the abstract of monthly monitoring data of 902 GL&WBs for the year 2022. The lakes are analysed monthly for change in water spread area with respect to area of Inventory 2009 and are categorized into 5 classes such as GLs & WBs showing

- (i) increase in water spread area greater than 40%
- (ii) increase in water spread area up to 40%
- (iii) no change in water spread area
- (iv) decrease in water spread area
- (v) change detection could not be performed due to reasons such as frozen condition, dried up condition, cloud cover etc.

The number of lakes in each class has been identified for each month. The lakes showing an increase in water spread area greater than 40% have been identified as those requiring vigorous monitoring for disaster purpose.

The trend of monthly change in water spread area of the Glacial Lakes (100 Nos.) and Water Bodies (79 Nos.) within India has been analyzed for 4 months of 2024 (July, August, September & October) for increasing, decreasing and no change trend with reference to the base data of first monthly data of 2024, for a variation of $\pm 5\%$. This facilitate easy identification of growing lakes for monitoring purpose in the upcoming year.

Few glacial lakes and water bodies being monitored by CWC have expanded and merged with nearby lakes. These lakes were identified from Sentinel 2 images and verified using Google Earth. However, merging and demerging of lakes is a dynamic process; hence figure of 902 Glacial Lakes & Water Bodies has been kept intact for analysis part.

Glacial Lake cascade can be defined as a single or group of glacial lakes in the upstream draining to a glacial lake in the downstream, thus showing a cascading effect. CWC monitors 100 Glacial Lakes of water spread greater than 10 Ha located in India which are spread across the states of Himachal Pradesh, Uttarakhand, Sikkim & Arunachal Pradesh and in the union territories of Jammu & Kashmir and Ladakh. Some of these Glacial lakes exhibit cascading effect. Such lakes have been identified state-wise from Google Earth.

Results of Monthly Monitoring Report and Conclusion:

Month	No of GL/WB monitored	No of GL/WB showing increase in area	No of GL/WB showing decrease in area	No of GL/WB showing no change in area	No of GL/WB with change detection not performed
June	902	354	434	83	81
July	902	456	351	43	52
August	902	484	345	39	34
September	902	458	358	45	41
October	902	404	414	57	27

- For the year 2024, it can be interpreted that the number of glacial lakes and water bodies showing an increase in area showed a gradual increase from June to August and further started showing a decline. This may be due to melting of the surface of the frozen lake as well as the mother glacier feeding to the glacial lake
- Form the trend analysis on change in water spread area of Glacial Lakes (100 Nos.) and Water Bodies (79) located in India, 26 Glacial Lakes and 28 Water Bodies have shown an increasing trend during the year 2024.
- The total Inventory area of **Glacial Lakes and Water Bodies** was 5,33,584 Ha during the year 2011 which has increased to 5,89,443 Ha during the year 2024 (October). There is a **10.46%** increase in area. *(Out of 902 GLs & WBs, only 838 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well GLS/WBs which were not analysed for the month of October, 2024.).*
- The total Inventory area of **Glacial Lakes** was 20,787 Ha during the year 2011 which has increased to 24,440 Ha during the year 2024 (October). There is a **17.57%** increase in area. *(Out of 544 GL, only 494 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well as lakes which were not analysed for the month of October, 2024.)*
- The total Inventory area of **Glacial Lakes within India** was 1,948 Ha during the year 2011 which has increased to 2,539 Ha during the year 2024 (October). There is a **30.34%** increase in area. *(Out of 100GL, only 56 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well as 6 lakes which were not analysed for the month of October, 2024.)*
- Most of the GLs & WBs exhibiting 40% or more increase in water spread area lie in transboundary region.
- 26 nos. of Glacial Lakes & Water Bodies have been merged to 13 nos. of Glacial Lakes & Water Bodies & combined area of merged glacial lakes and water bodies has been shown against respective glacial lakes and water bodies. However, merging and demerging of lakes is a dynamic process; hence figure of 902 Glacial Lakes & Water Bodies has been kept intact for analysis part.
- A total of 31 glacial lake cascades associated with monitored glacial lakes located in India were identified (Ladakh – 4 Nos., Jammu & Kashmir – 5 Nos., Himachal Pradesh – 1No., Uttarakhand – 1 No., Sikkim – 17 Nos., Arunachal Pradesh – 3 Nos.)

1. Introduction

1.1 Glacial Lakes and Water Bodies

A glacial lake is a body of water with origins from a glacier. It is formed when a glacier erodes the surface before melting and the melt water fills the resulting depression. The water in Glacial Lakes accumulates behind loose naturally formed 'glacial/moraine dams' made of ice, sand, pebbles and ice residue as the glaciers melt. Various types of lakes may have different levels of hazard potential depending upon many factors such as the nature of damming materials, position of the lake, volume of the water, the nature and position of the associated mother glacier, physical and topographical conditions, and other physical conditions of the surroundings. Interaction between the risk factors and triggering processes such as ice avalanches, debris flows, rock fall, earthquake or landslides reaching a lake strongly affect the risk of a lake outburst. Moraine-dammed lakes located at the snout of a glacier have a high probability of breaching with high hazard potential and can breach suddenly leading to catastrophic floods. Such outburst floods are known as Glacial Lake Outburst Flood (GLOF).

A water Body referred in this report is the body of water retained permanently due to obstruction created naturally or artificially but not directly associated with Glaciers.

1.2 Glacial Lakes in Indian Himalayan Region

The Indian Himalayan Region (IHR) contains the world's largest number of glaciers and snow outside the Polar Regions and are aptly called Third Pole of the world. It consist of three major river systems, ie, Indus, Ganga and Brahmaputra stretching over five countries viz. India, China, Nepal, Pakistan and Bhutan.

1.3 Inventory of Glacial Lakes & Water Bodies 2011

The work of monitoring of Glacial Lakes/Water Bodies (GLs/WBs) was taken up by CWC, DoWR, RD&DR, Ministry of Jal Shakti, during XI Plan period in the year 2009, under DWRIS Plan scheme. The inventory of glacial lakes and water bodies of the Himalayan region of Indian river basins published in June, 2011 was done in association with National Remote Sensing Centre (NRSC), Hyderabad based on the satellite data of Advanced Wide Field Sensor (AWiFS) of the Indian Remote Sensing Satellite, Resourcesat-2 collected from May to November, 2009. The inventory consisted of a total of 2028 glacial lakes and water bodies with water spread area greater than 10 Ha. The country-wise and basin-wise details of the Inventory are furnished in **Table No. 1.1** and **Table No. 1.2**

Table 1.1: Country-wise details of Glacial Lakes & Water Bodies of Inventory (2011)

Country	Glacial Lakes >10 Ha (Nos.)	Water Bodies >10 Ha (Nos.)	Total >10 Ha (Nos.)
India	60	448	508
Bhutan	77	124	201
Nepal	57	45	102
China	309	904	1213
Myanmar	-	4	4
Total	503	1525	2028

Table 1.2: Basin-wise details of Glacial Lakes & Water Bodies of Inventory (2011)

Basin Name	Glacial Lakes (Nos.)	Water Bodies (Nos.)	Total (Nos.)
Brahmaputra	294	1099	1393
Ganga	178	105	283
Indus	31	321	352
Total	503	1525	2028

1.4 Objectives

The broad objectives of the study are

- To monitor the spatial extent in terms of water spread area of the Glacial Lakes & Water Bodies from the inventory on monthly basis during June to October.
- To detect temporal changes in water spread area of Glacial Lakes & Water Bodies.
- To share the report with concerned stakeholders including National Disaster Management Authority / State Disaster Management Authority for suitable action.

1.5 Limitations and Assumption

Limitations

- Glacial lake identification can be done either using visual interpretation or automatic mapping methods. The automatic mapping procedures have limitations due to varying terrain conditions such as lakes being situated in the shadow portions of mountains, presence of snow cover, cloud cover, lakes being partly frozen, etc. As lake water absorbs the incident radiation making it appear in darker tone and colour in the standard FCC of satellite data, similar response also prevails over shadow region of clouds or mountains on surface, which may lead to incorrect mapping. Moreover, a mountain shadow covering a lake partly/completely within its vicinity, also makes it difficult to accurately map the lake boundary.
- A few Glacial lakes could not be mapped owing to the constraints such as they being under frozen condition, presence of snow or cloud cover over the lakes, lakes under mountain shadow or lakes in dried-up condition.

Assumptions:

- Inclusion or exclusion of water pixels near lake boundaries depending on more than or less than certain fraction of its area falling within the lake boundary.

2. Monitoring of Glacial Lakes and Water Bodies

2.1 Study Area

The present study area covers the Glacial Lakes & Water Bodies (GLs & WBs) lying in the region of Himalaya and TAR, that drain to India, based on 2011 Inventory of NRSC. The study area extends across the countries of India, Nepal, Bhutan and China.

The Glacial Lakes and Water Bodies taken up for monitoring in the study area are as follows:

- (i) **477** Glacial Lakes/Water Bodies, with water spread area greater than 50Ha which have been sourced from the inventory of Glacial Lakes & Water Bodies in the Indian Himalayan region(2011) (Ref: NRSC Report No. NRSC-RS&GISAA-WRG-CWC-Lakes- May2011-TR255).

The state-wise and basin-wise details of the 477 GLs/WBs above 50 Ha are shown in **Table.2.1**

Table 2.1: State-wise and Basin-wise details of the 477 GLs/WBs above 50 Ha (Nos.)

Country/ Area	State/UT	Glacial Lake>50Ha				Water Body >50Ha				Grand Total
		Indus Basin	Ganga Basin	Brahma- putra Basin	Total	Indus Basin	Ganga Basin	Brahma- putra Basin	Total	
India	Ladakh	3	0	0	3	26	0	0	26	26
	Jammu & Kashmir	0	0	0	0	16	0	0	16	16
	Himachal Pradesh	2	0	0	2	5	0	0	5	7
	Uttarakhand	0	0	0	0	0	6	0	6	6
	Sikkim	0	0	10	10	0	0	1	1	11
	Arunachal Pradesh	0	0	0	0	0	0	25	25	25
	Total	5	0	10	15	47	6	26	79	94
	India Total	15				79				94
Transboundary	China	1	36	40	77	49	19	191	259	336
	Bhutan	0	0	15	15	0	0	11	11	26
	Nepal	0	12	0	12	0	9	0	9	21
	Total	1	48	55	104	49	28	202	279	383
	Total Transboundary	104				279				383
Grand Total		Total Glacial Lakes = 119				Total Water Bodies = 358				477

- (ii) **425** Glacial Lakes, with water spread area between 10 Ha and 50 Ha. This include **385** Glacial lakes which have been taken from the inventory of Glacial Lakes & Water Bodies in the Indian Himalayan region(2011) (Ref: NRSC Report No. NRSC-RS&GISAA-WRG-CWC-Lakes-May2011-TR255), and **40** Glacial Lakes, which have been listed as high priority lakes, as per “Synthesis report on GLOF hazard and risk across the Indian Himalayan Region” prepared by Swiss Agency for Development and Cooperation (SDC) for NDMA.

This adds up to a total of **425 Glacial Lakes of water spread area between 10Ha and 50Ha**. The state-wise and basin-wise details of these lakes are shown in **Table No. 2.2**.

Table 2.2: State-wise and Basin-wise details of the 425 GLs/WBs with water spread area between 10Ha and 50 Ha

Country/Area	Glacial Lake of size 10Ha -50 Ha				Grand Total (Nos.)
	State/UT	Indus Basin (Nos.)	Ganga Basin (Nos.)	Brahmaputra Basin (Nos.)	
India	Ladakh	12	0	0	12
	Jammu & Kashmir	15	0	0	15
	Himachal Pradesh	8	0	0	8
	Uttarakhand	0	9	0	9
	Sikkim	0	0	32	32
	Arunachal Pradesh	0	0	9	9
	Total	35	9	41	85
	India Total	85			
Transboundary	China	11	74	147	232
	Bhutan	0	0	56	56
	Nepal	0	52	0	52
	Total	11	126	203	340
	Total Transboundary	340			
Grand Total		425			

Currently, a total of **902 Glacial Lakes and Water Bodies** are being monitored by CWC. Of these, 544 are Glacial Lakes and 358 are Water Bodies. The break-up of Glacial Lakes and Water Bodies is shown in **Figure 2.1**. The abstract of state-wise and basin-wise details of the 902 GLs & WBs being monitored by CWC on monthly basis are furnished in **Table no. 2.3**.

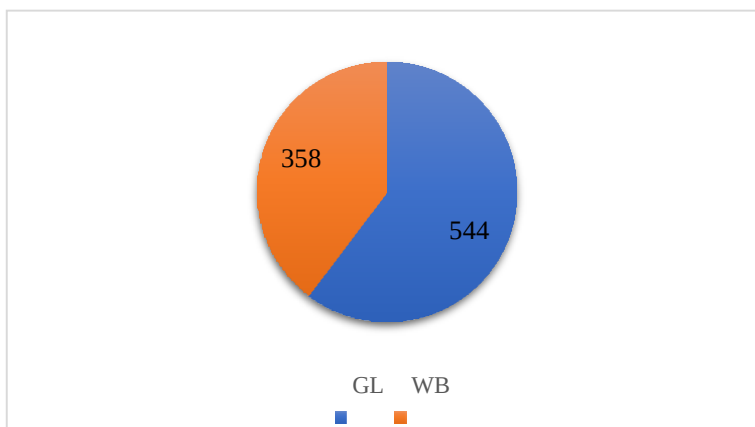


Figure 2.1: Lake Type Distribution

Table 2.3: Abstract of State-wise & Basin-wise details of GLs&WBs being monitored monthly by CWC

Country/ Area	State/ Union Territory	No of Glacial Lakes				No of Water Bodies				Grand Total
		Indus Basin	Ganga Basin	Brahma- putra Basin	Total	Indus Basin	Ganga Basin	Brahma- putra Basin	Total	
India	Ladakh	15	0	0	15	26	0	0	26	41
	Jammu & Kashmir	15	0	0	15	16	0	0	16	31
	Himachal Pradesh	10	0	0	10	5	0	0	5	15
	Uttarakhand	0	9	0	9	0	6	0	6	15
	Sikkim	0	0	42	42	0	0	1	1	42
	Arunachal Pradesh	0	0	9	9	0	0	25	25	35
	Total	40	9	51	100	47	6	26	79	179
	India Total	100				79				179
Transboundary	China	12	110	187	309	49	19	191	259	568
	Bhutan	0	0	71	71	0	0	11	11	82
	Nepal	0	64	0	64	0	9	0	9	73
	Total	12	174	258	444	49	28	202	279	723
	Transboundary Total	444				279				723
Grand Total		544				358				902

The index map of the study area is shown in **Figure. 2.2**, and the location map of the study area showing the glacial lakes and Water Bodies being monitored by CWC is shown in **Figure.2.3**.

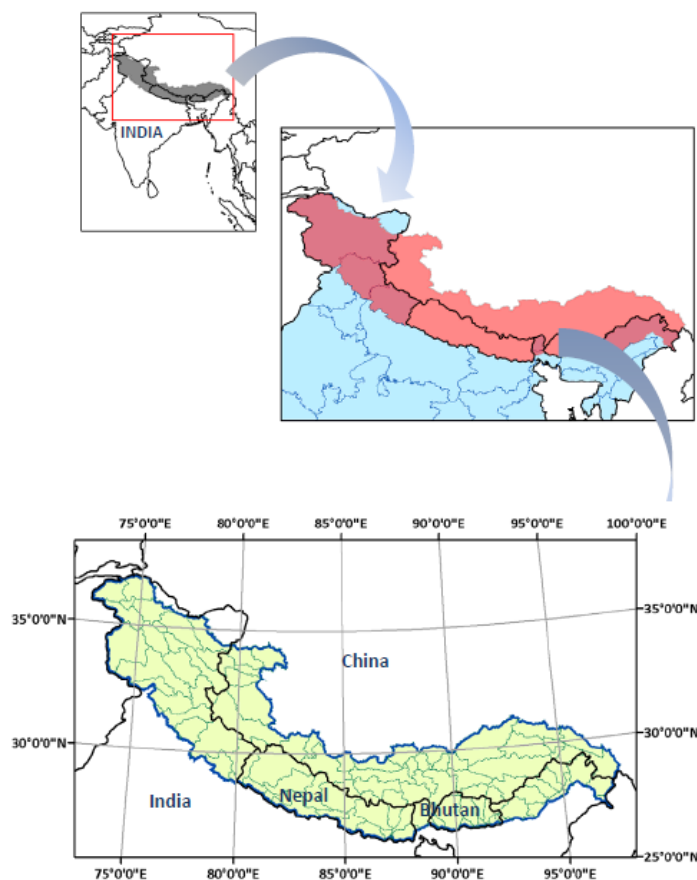


Figure 2.2: Index Map of Study Area

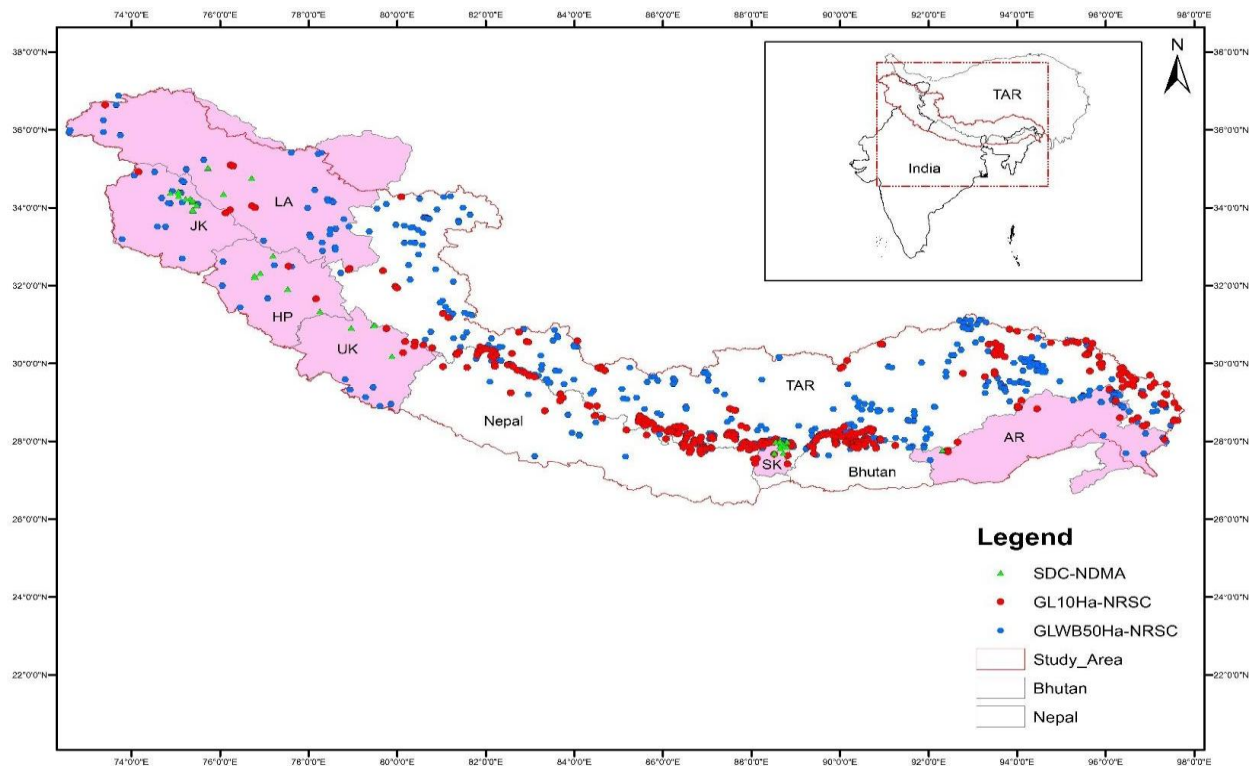


Figure 2.3: Map of Study Area showing Glacial Lakes and Water Bodies being monitored by CWC

The GLs & WBs are mostly located at an elevation range of 3000m to 5000m. A few of them are located above elevation of 5000m and some below 3000m. The elevation of Waterbodies range from 200 m to 5000m. This can be visualized by comparing the location map of study area (**Figure 2.3**) with the relief map of the study area shown in **Figure 2.4**. The elevation range of GLs & WBs being monitored by CWC is shown in **Figure 2.5**



Figure 2.4: Relief Map of the Study Area

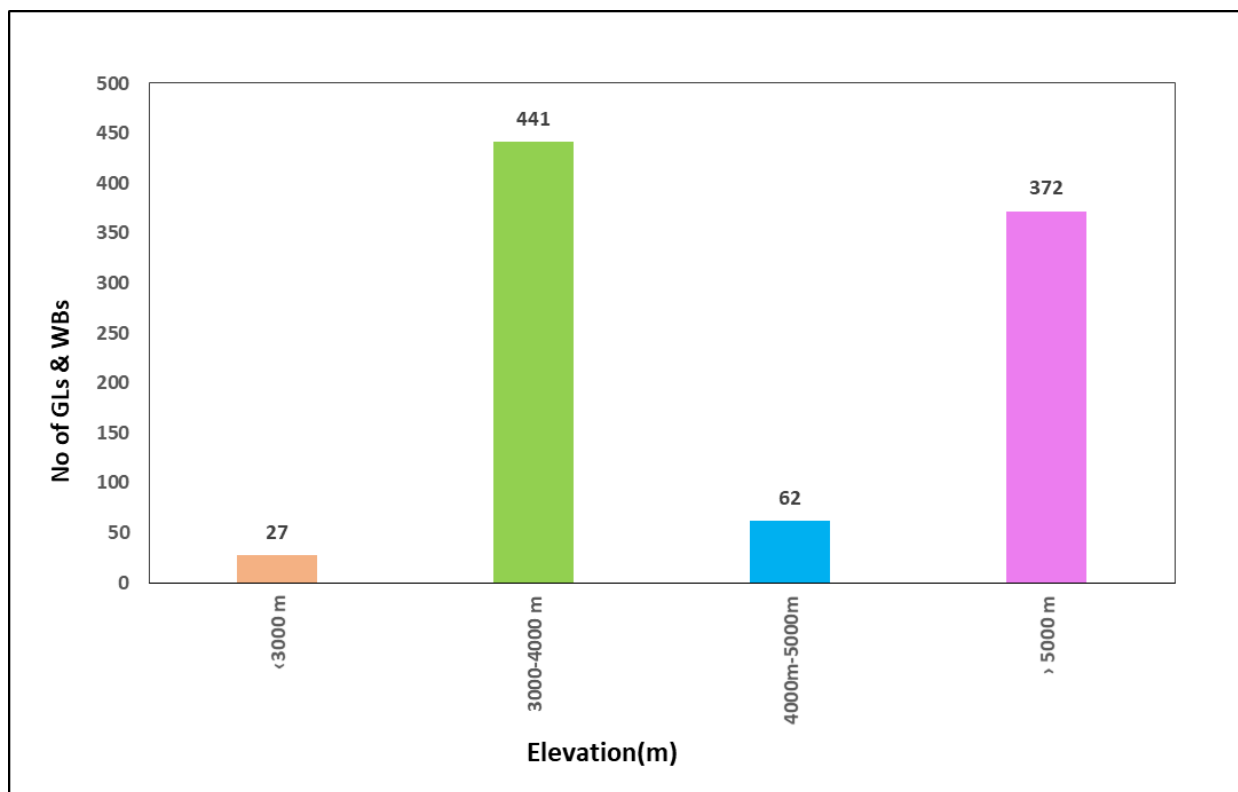


Figure 2.5: Elevation Range of GLs&WBs within Indian Himalayan Region being monitored by CWC

The country-wise distribution of Glacial Lakes & Water Bodiess being monitored by CWC is shown in **Figure 2.6**.

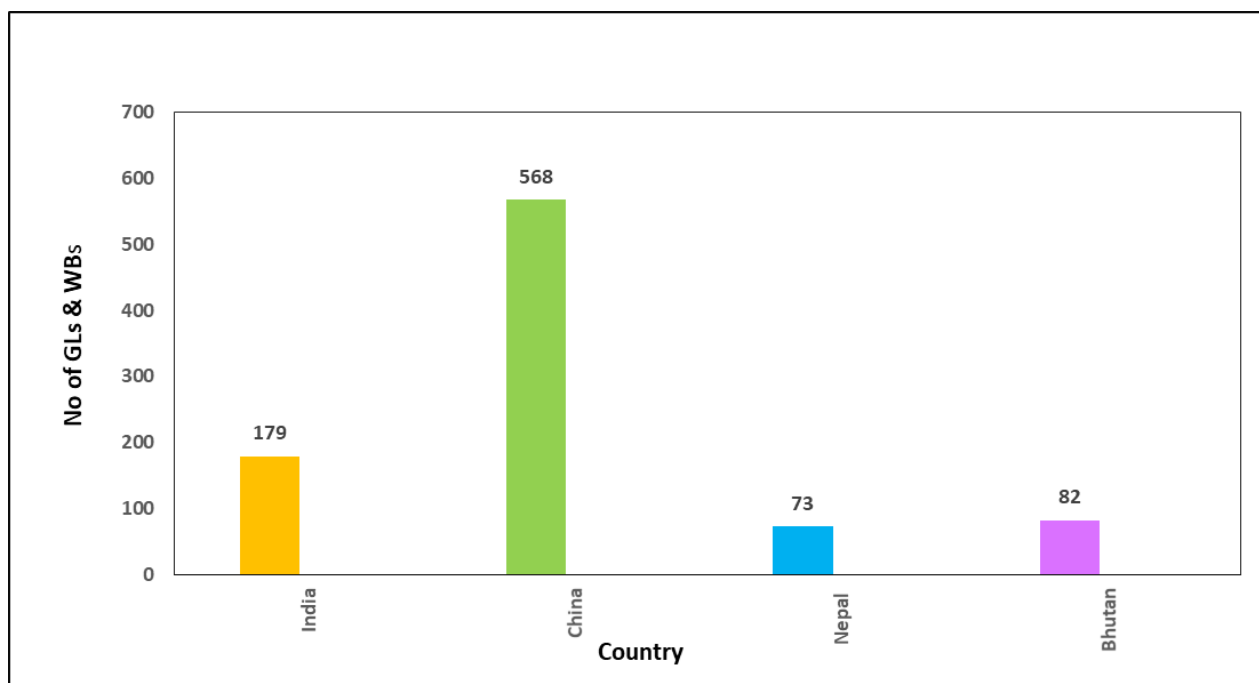


Figure 2.6:Country-wise distribution of GLs & WBs in Indian Himalayan Region being monitored by CWC

The state-wise distribution of Glacial Lakes being monitored by CWC within India is shown in **Figure 2.7**.

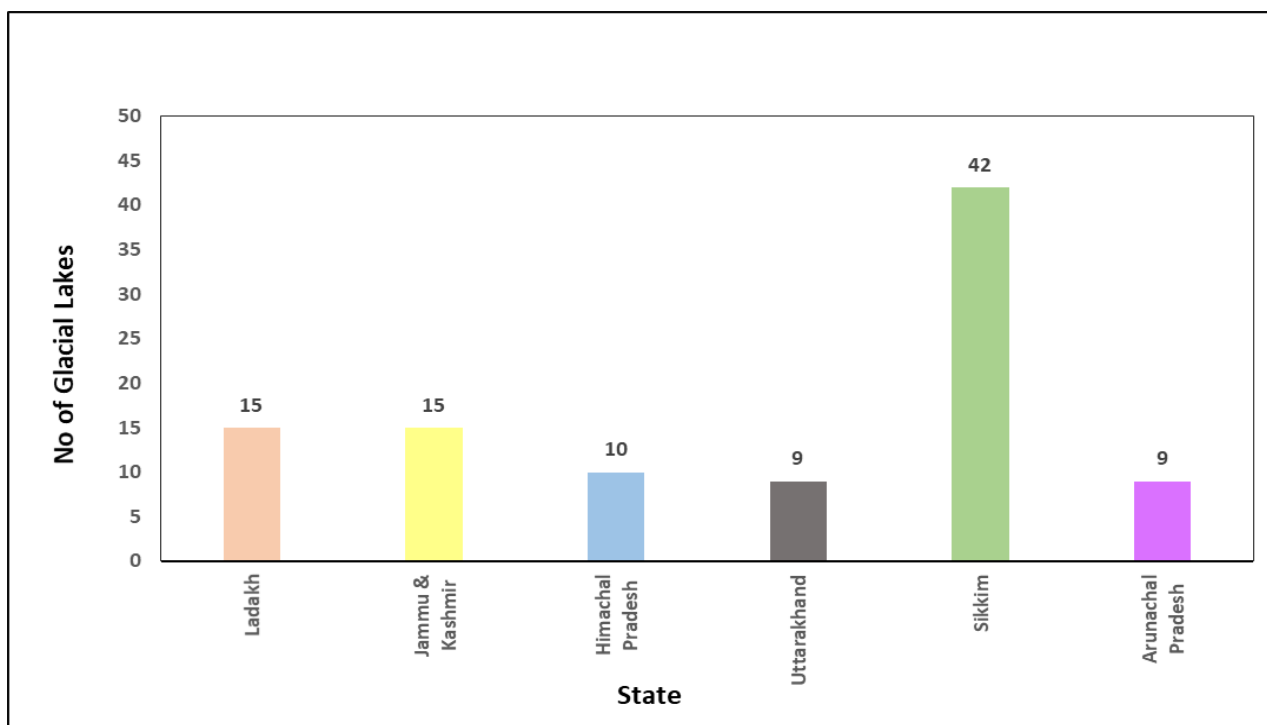


Figure: 2.7: State-wise Distribution of Glacial Lakes within India being monitored by CWC

The State-wise distribution of Water Bodies within India being monitored by CWC is shown in **Figure 2.8**.

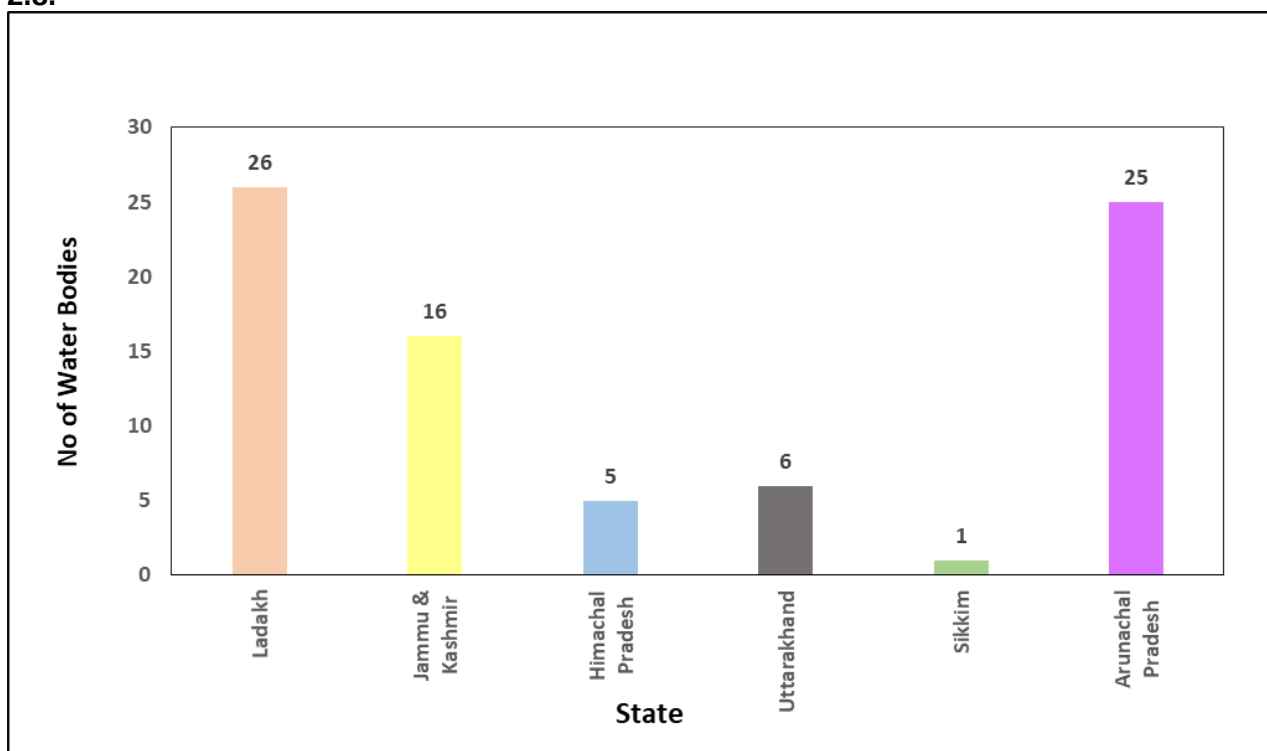


Figure: 2.8 State-wise Distribution of Water Bodies being monitored by CWC

2.2 Remote Sensing Technology

Remote sensing is the science of acquiring information about the Earth's surface without actually being in contact with it. This is done by sensing and recording reflected or emitted energy and processing, analysing, and applying that information. Satellite remote sensing technology has contributed significantly to the acquisition of Earth's resources, thus helping in their better management. They also play a complementary role to the conventional data collection procedures. Satellite remote sensing offers several unique advantages like quick and repetitive data collection, reliability, accuracy, geometric integrity and digital storage, which makes it an ideal tool for mapping, inventorying and monitoring the natural resources.

Monitoring of glacial lakes located in remote mountain areas with rugged terrain and inclement weather by traditional means is very tedious and difficult. Hence Remote Sensing data plays a greater role in generating information on glacial lakes. Satellites with high spatial, spectral and temporal resolution sensors are useful in deriving lake information with better accuracy at regular intervals. Visual and digital image processing and analysis techniques integrated with Geographic Information Systems (GIS) are very useful for the study and monitoring of Glacial Lakes and Water Bodies.

The monitoring was done by downloading and manually digitising Advanced Wide Field Sensor (AWiFS) Satellite imagery procured/ downloaded from NRSC till 2021. The SENTINEL-2 Multispectral Imagery (MSI) and Sentinel-1 Synthetic Aperture Radar (SAR) data (Microwave Imagery) have been utilized for the study.

2.2.1 Sentinel-2 Multi Spectral Imagery

The Sentinel-2 mission comprises of a constellation of two polar-orbiting satellites placed in the same sun-synchronous orbit, phased at 180° to each other. It is a wide-swath, high-resolution, multi-spectral imaging mission for monitoring of vegetation, soil and water cover, inland waterways and coastal areas. The SENTINEL-2 Multi-Spectral Instrument (MSI) has visible, near infrared and shortwave infrared sensors sampling 13 spectral bands - 4 bands at 10 m, 6 bands at 20 m and 3 bands at 60 m spatial resolution with a swath width of 290 km. The revisit frequency of each single SENTINEL-2 satellite is 10 days and the combined constellation revisit is 5 days. The Green, Red and NIR bands have been utilized for this study.

2.2.2 Sentinel-1 Synthetic Aperture Radar (Microwave Imagery)

The Sentinel-1 mission comprises a constellation of two polar-orbiting satellites, Sentinel-1A and Sentinel-1B, sharing the same orbital plane. It has C-band synthetic aperture radar (SAR) active sensor. Synthetic Aperture Radar (SAR) has the advantage of operating at wavelengths not impeded by cloud cover or a lack of illumination and can acquire data over a site during day or night time under all weather conditions. SAR actively transmits microwave signals towards the Earth and receives a portion of transmitted energy as backscatter from the ground. The SAR instrument provides radar backscatter measurements influenced by the terrain structure and surface roughness. Generally, the more roughness or structure on the ground, the greater the backscatter. Rough surfaces will scatter the energy and return a significant amount back to the antenna resulting in a bright feature. The C-band imaging operates in four exclusive imaging modes with different resolution (down to 5 m) and coverage (up to 400 km). It provides dual polarisation capability, very short revisit times and rapid product delivery. It can transmit a signal in either horizontal (H) or vertical (V) polarisation, and then receive in both H and V polarisations. For each observation, precise measurements of spacecraft position and altitude are available. The repeat orbit cycle of each Sentinel-1 satellite is 12-day. The backscatter intensity of vertical transmit-vertical receive (X) band (VV band) data has been utilized for the study.

2.2.3 Challenges in Identification of Lakes from Satellite Imagery

Glacial lake identification can be done either using visual interpretation or automatic mapping methods. The automatic mapping procedures have limitations due to varying terrain conditions such as lakes situated in the shadow portions of mountains, presence of snow cover, cloud cover, lakes being partly frozen, etc. As lake water absorbs the incident radiation making it appear in darker tone and colour in the standard FCC of satellite data, similar response also prevails over shadow region of clouds or mountains on surface, which may lead to incorrect mapping. Moreover, a mountain shadow covering a lake partly/completely within its vicinity, also make it difficult to accurately map the lake boundary.

2.2.4 Limitations in Remote Sensing Technology

The Sentinel satellite images used for monitoring of Glacial Lakes were occasionally obscured with cloud and seasonal/permanent snow. Also, the Himalayan region being highly varying in topography with steep slopes, the satellite images have hill shadows. Thus, a few Glacial lakes could not be mapped owing to the following constraints

- Glacial lakes being under frozen condition
- Presence of snow or cloud cover over the glacial lakes
- Glacial Lakes under mountain shadow
- Dried up Glacial Lakes

3. Methodology

Google Earth Engine(GEE) has been used to process the Multispectral and Microwave Sentinel image data for the monitoring of Glacial Lakes & Water Bodies. Google Earth Engine (GEE) is a cloud-based geospatial analysis platform that enables users to visualize and analyze satellite images. The Microwave and Multispectral Satellite works on different principle, and hence separate methodology has been adopted to compute the water spread area of GL&WBs in an automatic manner.

Multispectral data consist of visible and infrared bands. The spectral combination of NIR, red & green bands is used to generate false colour composite (FCC). The Normalised Difference Water Index (NDWI) is computed using green and NIR band. The process of calculation of NDWI and FCC is repeated for each GL&WB. The OTSU algorithm is further used to identify the threshold of NDWI for segregating water pixels from other types of features. The detected water pixels are further summed to calculate water spread area in the region of interest.

Microwave data of Sentinel-1 is a phase-preserving dual polarisation SAR system. The backscatter intensity of vertical transmit vertical receive (X) band has been used to distinguish water pixels from other types of features. The OTSU algorithm is further used to identify the threshold of backscatter intensity for segregation. The water spread area of each lake has been calculated by summation of water pixels in the region of interest.

The automated area of the GLs&WBs are then verified manually in GEE. The lakes which show discrepancy in automated area extraction are required to be delineated manually based on the visual interpretation. This is required as the region being monitored has rugged terrain with high mountains and deep valleys, which may lead to effects like foreshortening, layover, mountain shadows etc in the microwave/SAR data. Cloud cover hinders the performance of Multispectral Satellite images.

The change detection in water spread area of a Lake has been calculated for the following three cases for each month.

- Difference between the current area of lake and base year area(2009)
- Difference between the current area of lake and Last five years average area
- Difference between the current area of lake and Last ten years average area

The minimum of change observed from the above three cases has been adopted to identify increase, decrease and no change in water spread area.

Thereafter the lakes are categorized as lakes with increase in water spread area greater than 40%, increase in water spread area up to 40%, no change in water spread area, decrease in water spread area and lakes for which analysis could not be performed due to limitations in remote sensing technology such as cloud cover, frozen condition, dried up condition etc.

The detailed flow-chart on methodology for automatic monitoring of Glacial Lakes and Water Bodies using satellite images is given below in **Figure 3.1**

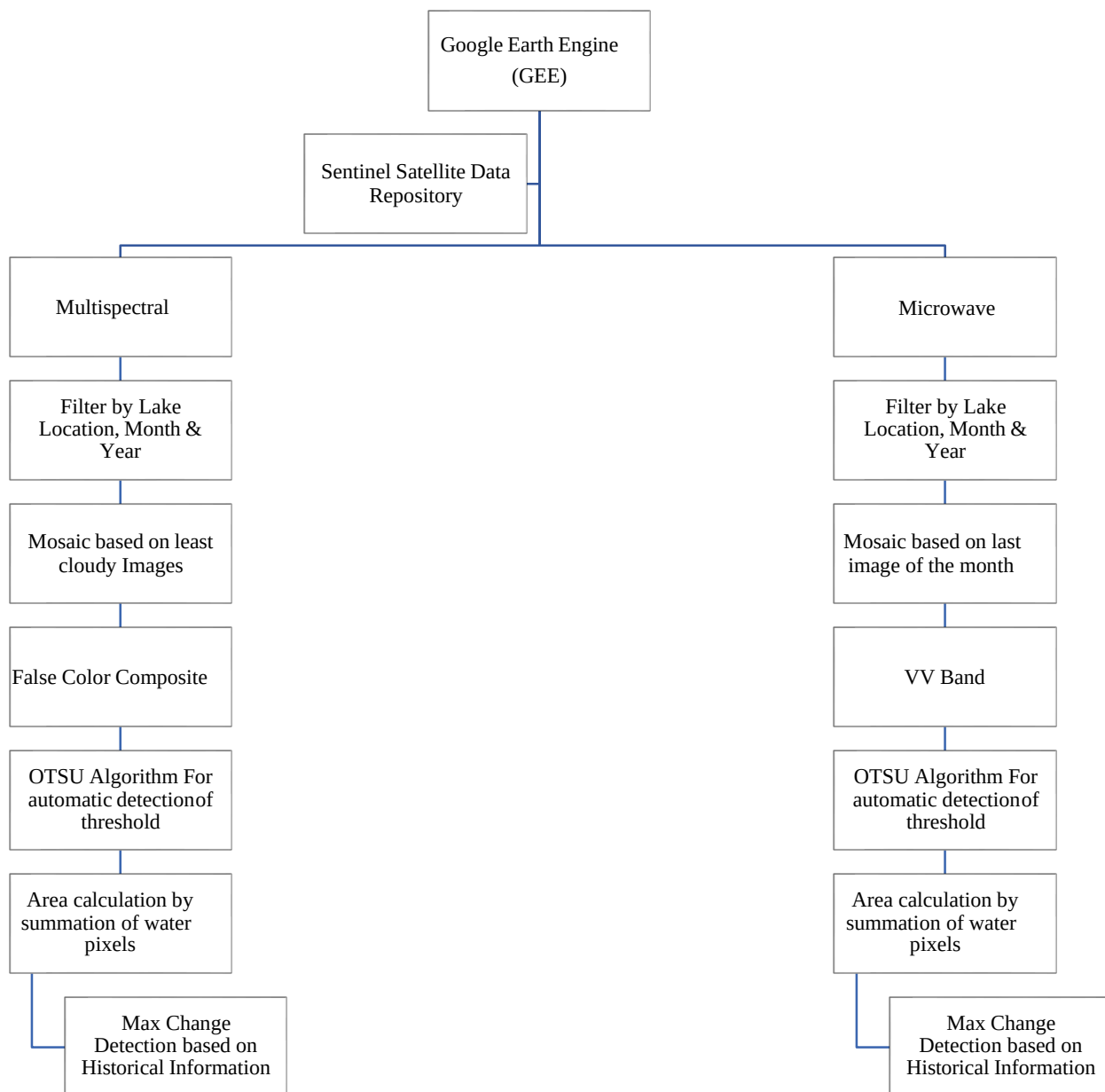


Figure 3.1: Flowchart on Methodology for automatic monitoring of Glacial Lakes & Water Bodies using Satellite Images

4. Results of Monthly Monitoring of Glacial Lakes 2024

Monthly monitoring of 902 GLs & WBs was carried out during the year 2024 for the months of June, July, August, September & October. The month-wise brief of results is given below.

4.1 June 2024

During June 2024, it was observed that 354 GLs & WBs exhibited an increase in area, 434 exhibited decrease in area and 33 exhibited no change in area. The change detection of 81 GLs & WBs could not be performed. The same is shown in **Figure 4.1**.

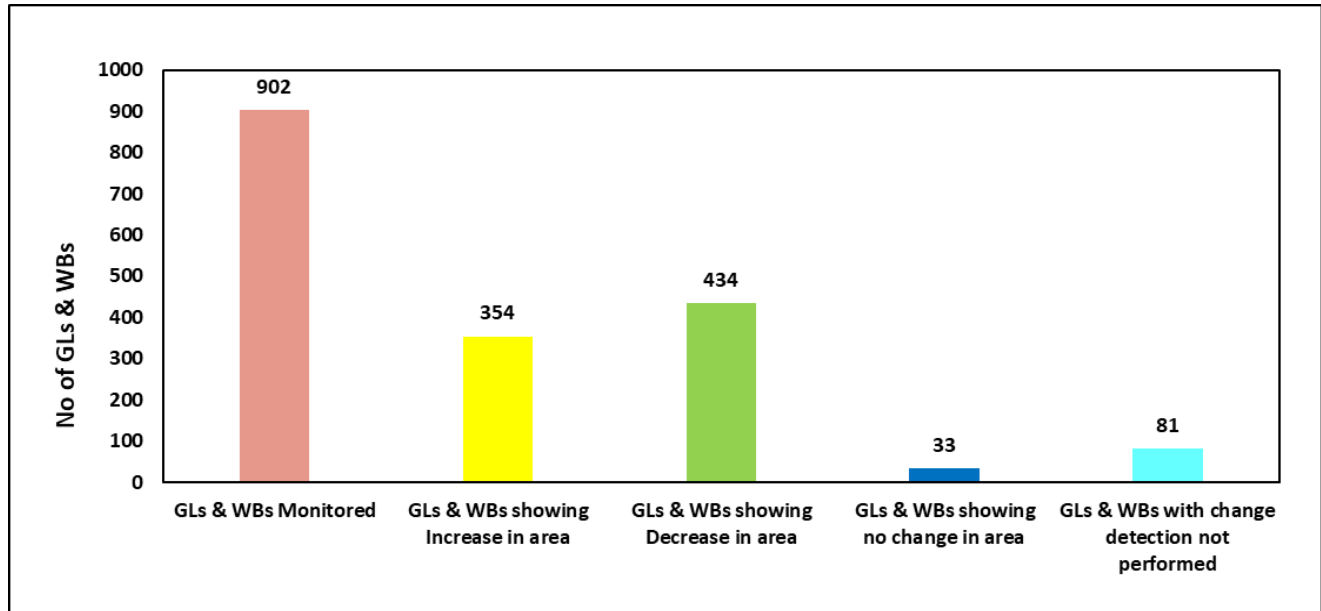


Figure 4.1: Outcome of monitoring of GLs/WBs for June 2024

4.2 July 2024

During July 2024, it was observed that 456 GLs & WBs exhibited an increase in area, 351 exhibited decrease in area and 43 exhibited no change in area. The change detection of 52 GLs & WBs could not be performed. The same is shown in **Figure 4.2**.

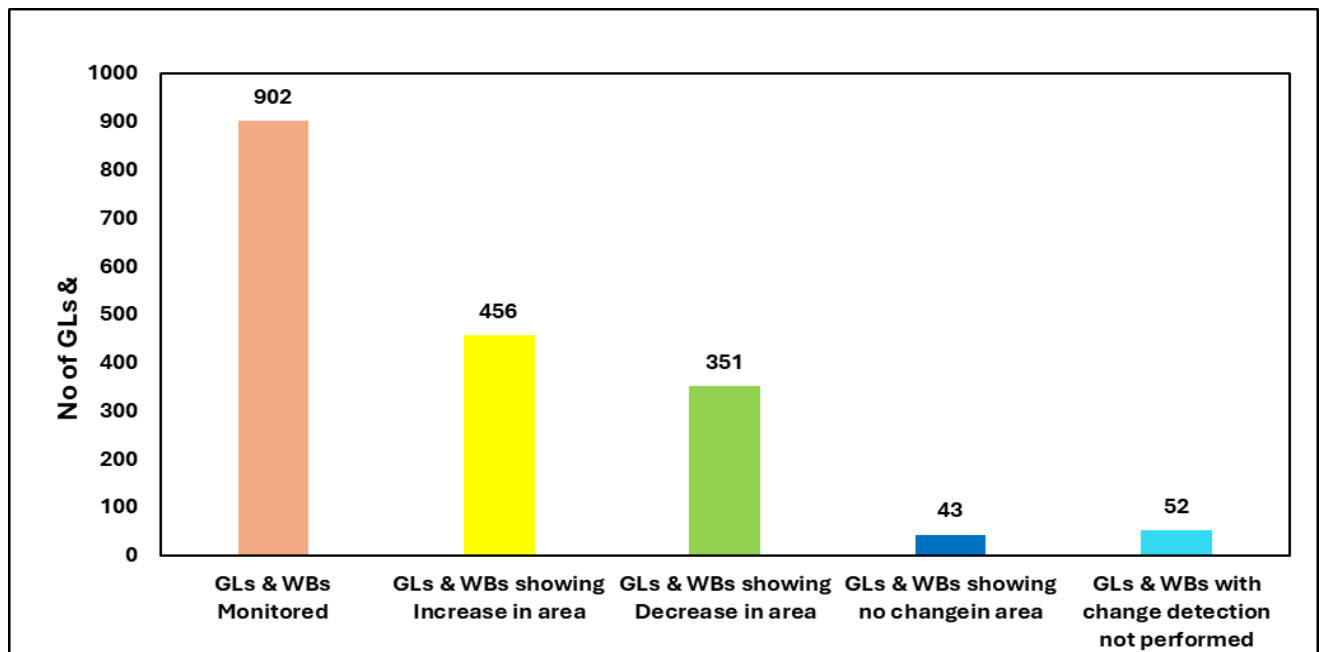


Figure 4.2: Outcome of monitoring of GLs/WBs for July, 2024

4.3 August 2024

During August 2024, it was observed that out 484 GLs & WBs exhibited an increase in area, 345 exhibited decreases in area and 39 exhibited no change in area. The change detection of 34 GLs & WBs could not be performed. The same is shown in **Figure 4.3**.

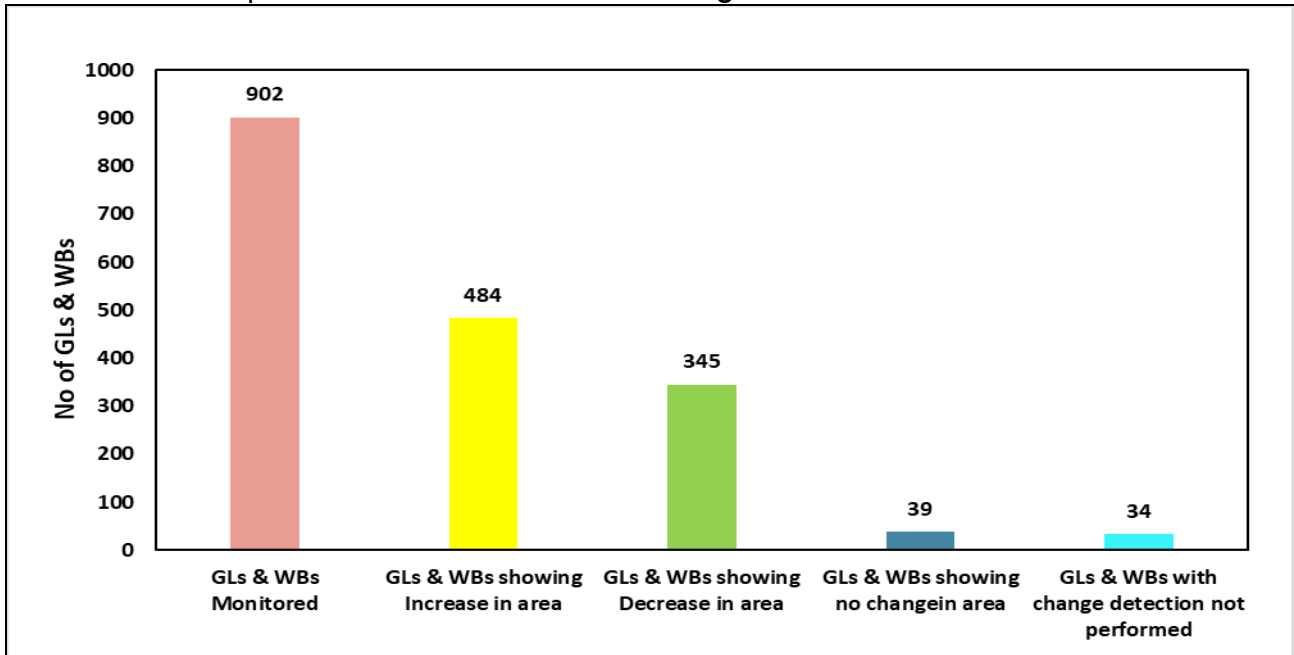


Figure 4.3: Outcome of monitoring of GLs/WBs for August, 2024

4.4 September 2024

During September 2024, it was observed that 458 GLs & WBs exhibited an increase in area, 358 exhibited decreases in area and 45 exhibited no change in area. The change detection of 41 GLs & WBs could not be performed. The same is shown in **Figure 4.3**.

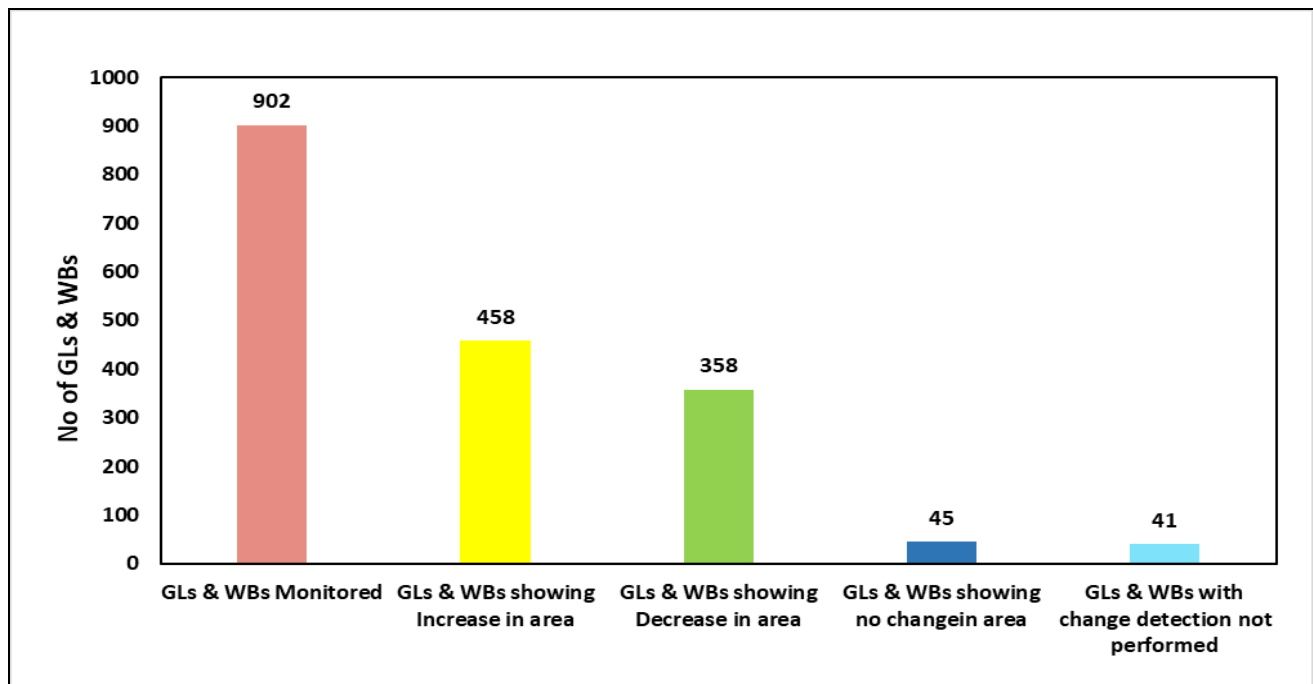


Figure 4.4: Outcome of monitoring of GL/WBs for September 2024

4.5 October 2024

During October 2024, it was observed that 404 GLs & WBs exhibited an increase in area, 414 exhibited decrease in area and 57 exhibited no change in area. The change detection of 27 GLs & WBs could not be performed. The same is shown in **Figure 4.3**.

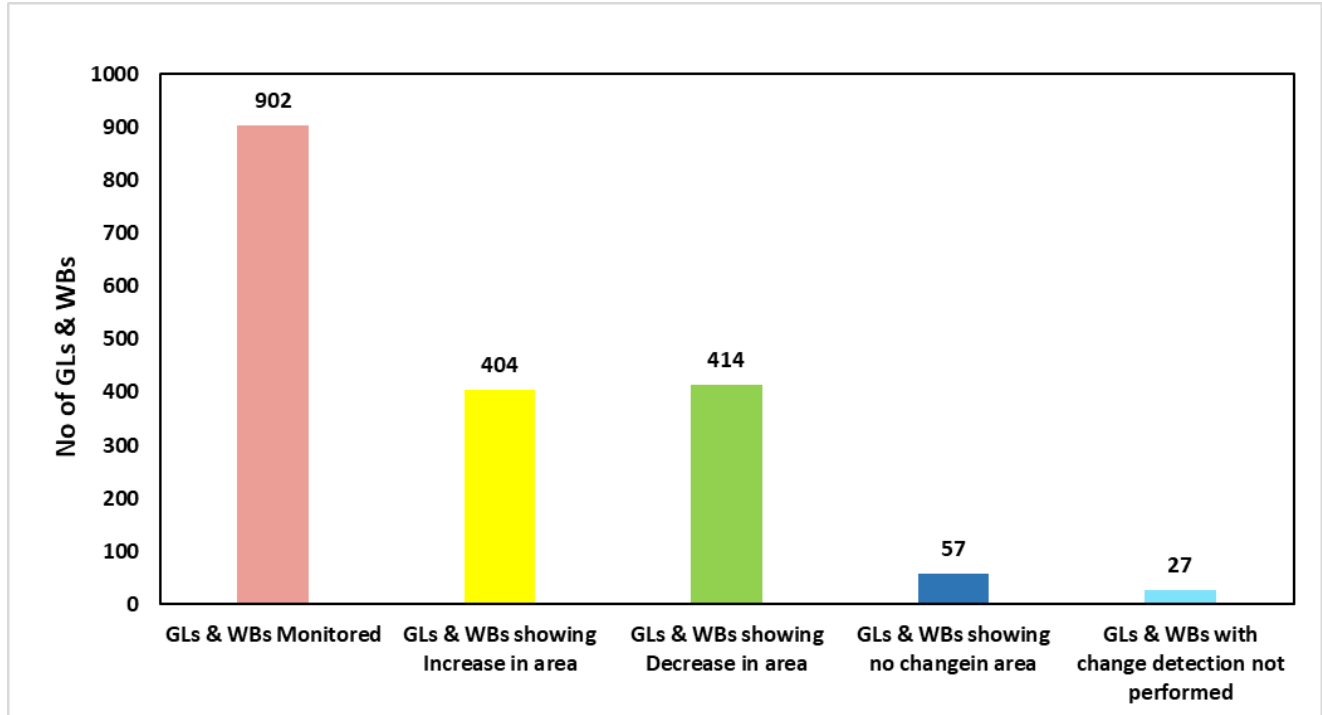


Figure 4.5: Outcome of monitoring of GLs/WBs for October 2024

We have been able to monitor all Glacial Lakes and Water bodies during most of the time out of total span of five months in the year 2024, except **4 Glacial Lakes in India and 4 Glacial lakes in China**. This may be due to the shrinkage/drying out of lakes, or due to limitations in remote sensing technology like foreshortening, lay-over, shadow etc.

5. Analysis of “Change in Water spread area of Glacial Lakes and Water Bodies within India” with reference to June data (or first available monthly data) for the year 2024

5.1 Methodology

There are a total of **179 GLs & WBs** within India which are being monitored on monthly basis using remote sensing technology. This includes **100 Glacial Lakes and 79 Water Bodies**. The Water Bodies have a water spread area greater than 50 Ha, meanwhile 15 GLs have water spread area greater than 50 Ha and the remaining 85 GL have an area between 10 Ha to 50 Ha.

The monthly water spread area for the months of June, July, August, September and October, 2024 was tabulated in Microsoft Excel for each of the lakes. A 2-D graph was plotted with **Time** along the X-axis and **Water-spread area** along the Y-axis to depict the variation in water spread area. A band has been created with June data $\pm 5\%$ of June data. For lakes where June 2024 data was not available, the first available monthly data was considered. A Linear trend line was generated for each of the lakes. The trend line was used to categories the lakes into three categories– lakes with increasing trend, no change and decreasing trend, depending on the last point of trend line lies above, within or below the band respectively.

5.2 Inferences from the Analysis on Glacial Lakes

26 Glacial Lakes showed an increasing trend, 39 GLs showed no change in trend and 31 GLs showed a decreasing trend. The trend analysis of 4 GLs couldn't be analyzed due to limitations of remote sensing technology, for the year 2024. The same is shown in **Figure 5.1**.

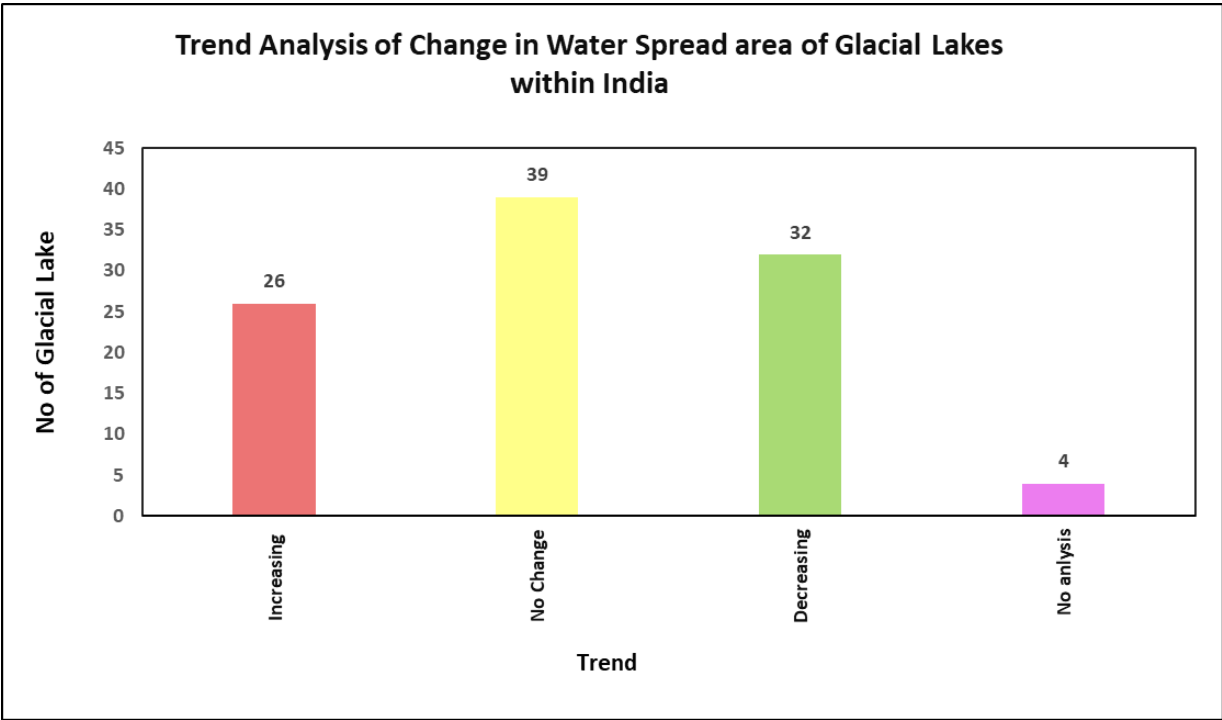


Figure 5.1: Outcome of trend analysis of Glacial Lakes for the year 2024

The consolidated details of the analysis of “Change in Water spread area of Glacial Lakes within India for the year 2024 are furnished in **Table No.5.1**. The details of lakes showing increasing trend, decreasing trend & no change trend are shown in **Table No. 5.1.a, 5.1.b & 5.1.c** respectively. **Table No. 5.1.d** tabulates the lakes for which analysis was not possible.

5.3 Inferences from the Analysis on Water Bodies.

28 Water Bodies showed an increasing trend, 37 WBs showed no change in trend and 14 WBs showed a decreasing trend during the year 2024. The same is shown in **Figure 5.3**.

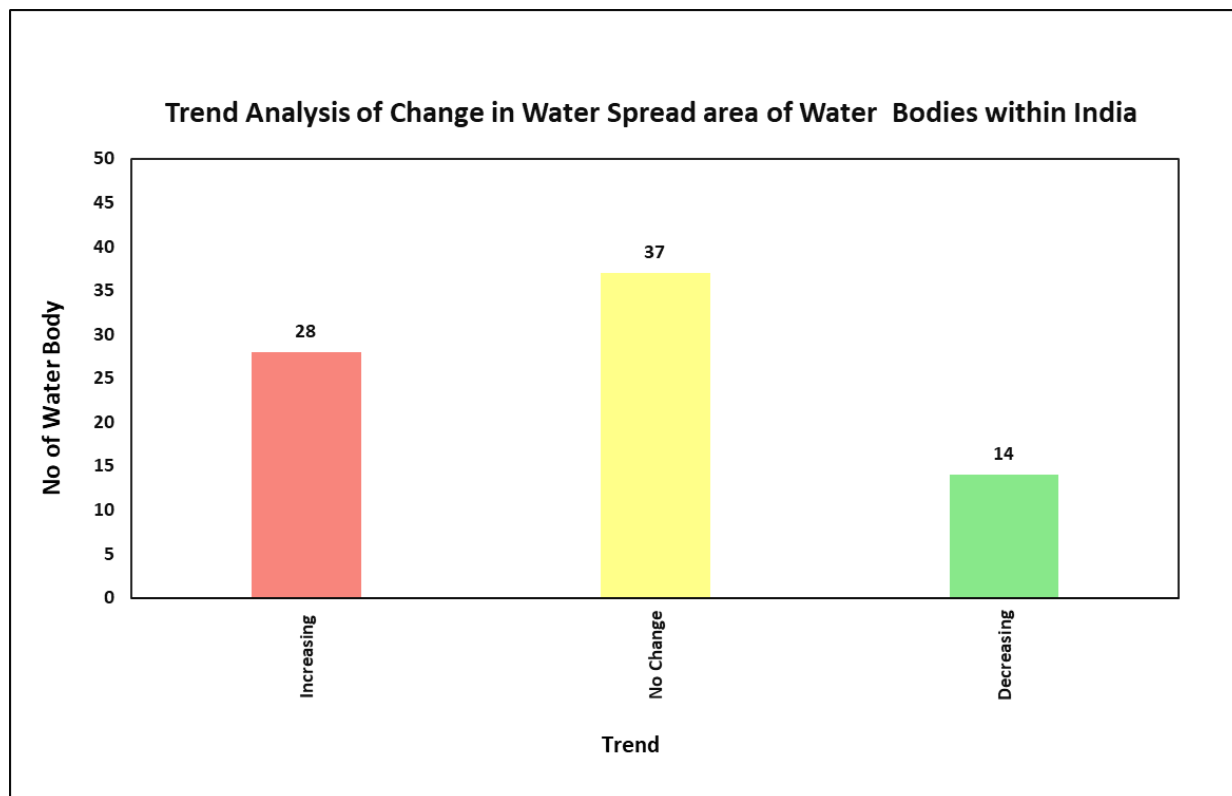


Figure 5.2: Outcome of trend analysis of Water Bodies for the year 2024

The consolidated details of the analysis of “Change in Water spread area of Water Bodies within India for the year 2024 are furnished in **Table No.5.2**. The details of lakes showing increasing trend, decreasing trend, no change trend are shown in **Table No. 5.2.a, 5.2.b & 5.2.c** respectively.

5.4: Conclusion

Glacial Lakes

- 26 Glacial Lakes exhibited an increasing trend with respect to change in water spread area during the year 2024 which need more attention during the next monitoring cycle for the year 2024.

Water Bodies

- 28 Water Bodies exhibited an increasing trend with respect to change in water spread area during the year 2024.

6.0 Details of Transboundary Glacial Lakes and Water Bodies analyzed for the year 2024

There are a total of 723 Transboundary Glacial Lakes and Water Bodies being monitored by CWC. They are spread across the countries of China, Nepal and Bhutan. The monthly monitoring details of the transboundary Glacial Lakes and Water Bodies Monitored for the year 2024 is furnished in **Table No. 6.1**.

7.0 Merged Glacial Lakes & Water Bodies

Few glacial lakes and water bodies being monitored by CWC have expanded and merged with nearby lakes. These lakes were identified from Sentinel 2 images and verified using Google Earth. 26 nos. of Glacial Lakes & Water Bodies have been merged to 13 nos. of Glacial Lakes & Water Bodies & combined area of merged glacial lakes and water bodies has been shown against each lakes in Table 5.1, 5.2 & 6.1. However, merging and demerging of lakes is a dynamic process; hence figure of 902 Glacial Lakes & Water Bodies has been kept intact for analysis part. Details of merged Glacial Lakes & Water Bodies are in table 7.1. Figure 7.1 shows the merged lake in Himachal Pradesh (Lord Vishnu Lake).

Table 7.1: List of Glacial Lake & Water Bodies

Sl. No.	ID	GL/WB	Location	Remarks
1	03_71G_008	WB	China	Merged with nearby lake not in inventory 2011
2	03_71K_011	WB	China	Merged with nearby lake not in inventory 2011
3	03_82N_032	GL	China	Merged with nearby lake not in inventory 2011
4	03_62O_040	WB	China	Merged with nearby lake not in inventory 2011
5	01_61C_014	WB	China	Merged with each other
	01_61C_015			
6	03_78E_009	WB	China	Merged with each other
	03_78E_010			
7	03_62O_041	WB	China	Merged with each other
	03_62O_042			
8	03_71K_007	WB	China	Merged with each other
	03_71K_009			
9	03_91C_035	GL	China	Merged with each other
	03_91C_036	GL		
10	02_71P_018	WB	China	Merged with each other
	02_71P_019	GL		
	02_71P_020	GL		
11	03_77L_048	GL	China	Merged with each other
	03_77L_053	GL		
12	01_61C_002	WB	China	Merged with each other
	01_61C_004	WB		
	01_61C_005	WB		
	01_61C_010	WB		
	01_61C_011	WB		
13	01_52H_003	GL	India (Himachal Pradesh)	Merged with each other
	01_52H_004			

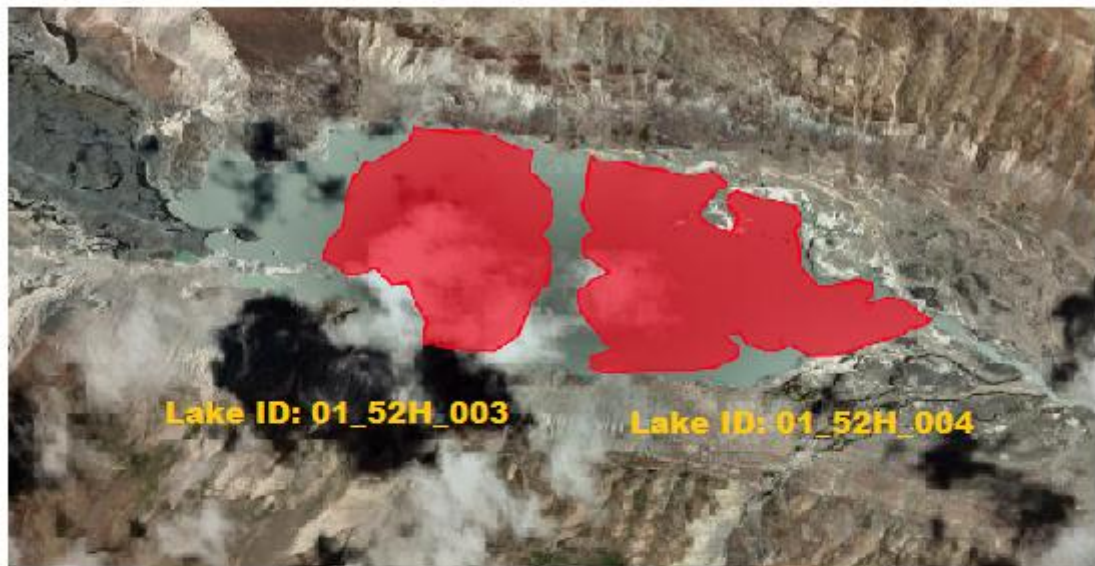


Figure 7.1: Merged Glacial Lake of Himachal Pradesh (Lord Vishnu Lake)

8. Identification of Glacial Lake Cascades located in India

Glacial Lake cascade can be defined as a single or group of glacial lakes in the upstream draining to a glacial lake in the downstream, thus showing a cascading effect. New glacial lakes are forming at higher elevations above existing lakes. As a result, the risk of cascade outburst has increased, whereby even a small volume release from a higher lake could trigger a larger volume release from a lower lake which may pose high risk to the downstream community creating catastrophic floods.

CWC monitors 100 Glacial Lakes of water spread greater than 10 Ha located in India which are spread across the states of Himachal Pradesh, Uttarakhand, Sikkim & Arunachal Pradesh and in the union territories of Jammu & Kashmir and Ladakh. Some of these Glacial lakes exhibit cascading effect. Such lakes have been identified state-wise from Google Earth.

8.1 Methodology for Delineation of Glacial Lake Cascades

The glacial lakes being monitored by CWC exhibiting cascading effect have been identified from Google Earth. Initially, the glacial lakes upstream of a particular lake were identified. Further, the outlets of upstream lake/lakes were ascertained manually by comparing the elevation of the pixels surrounding the lake boundary. The flow path of glacial lakes in cascade were then digitized. This required images of multiple years for different seasons, as the water and land area remains snow covered in many images of these higher terrains. The latest Sentinel 2 images were also utilized for cross verification.

8.2 Glacial Lake Cascades in Ladakh

Four (4) glacial lake cascades were identified in the union territory of Ladakh. The images showing the flow path of cascading lakes of Ladakh are shown in figures 8.1 to 8.4. The details of these glacial lakes are shown in Table 8.1.

Table 8.1: Details of Glacial Lakes depicting cascading effect in Ladakh

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Inventory Area 2011 (ha) (i)	Lake Area October 2024 (Ha)
1	01_52A_003	NRSC	4586	35° 5' 33.36"	76° 15' 7.2"	Indus	Shyok	24	14
2	01_52L_006	NRSC	5727	32° 26' 27.24"	78° 55' 29.28"	Indus	Indus	12	11
3	180	SDC	4442	34° 21' 10.8"	76° 4' 37.2"	Indus	Indus	-	16
4	1360	SDC	4667	35° 1' 37.2"	75° 43' 30"	Indus	Indus	-	14

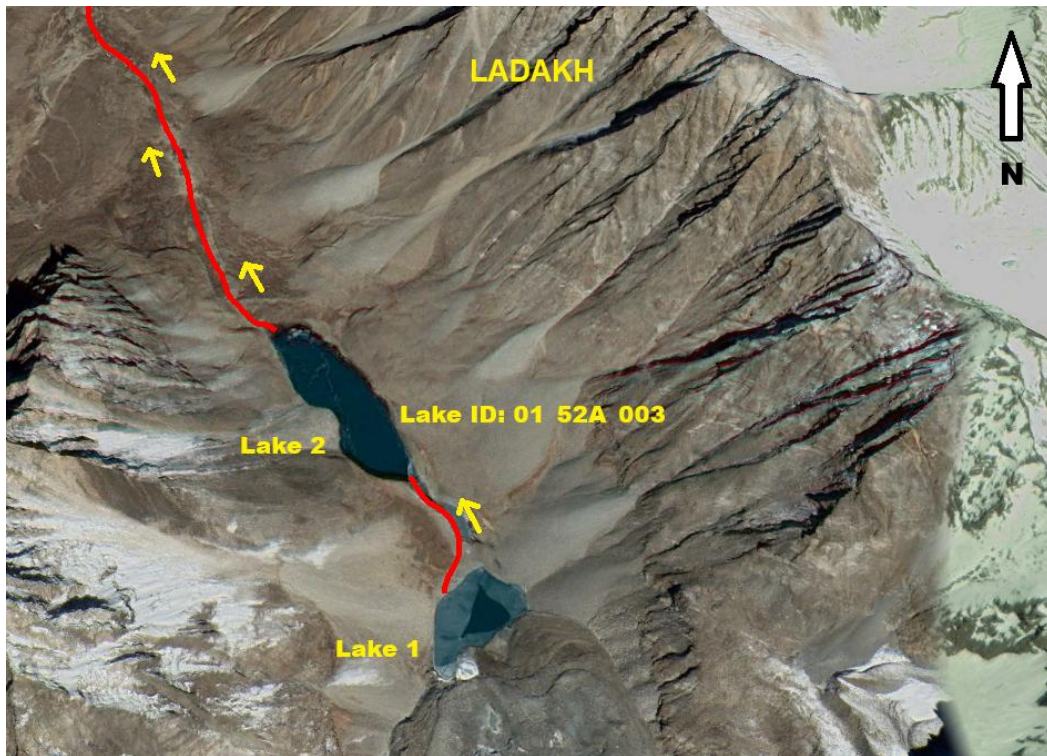


Figure 8.1: Flow path of cascading lakes of Lake ID:01_52A_003

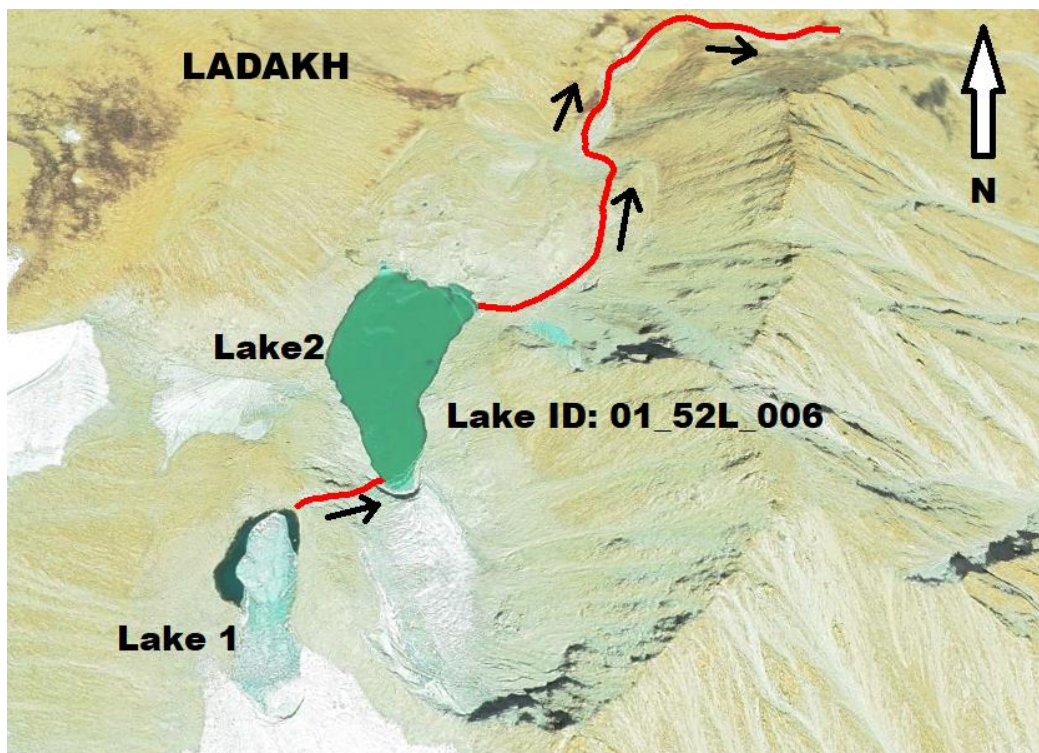


Figure 8.2: Flow path of cascading lakes of Lake ID:01_52L_006

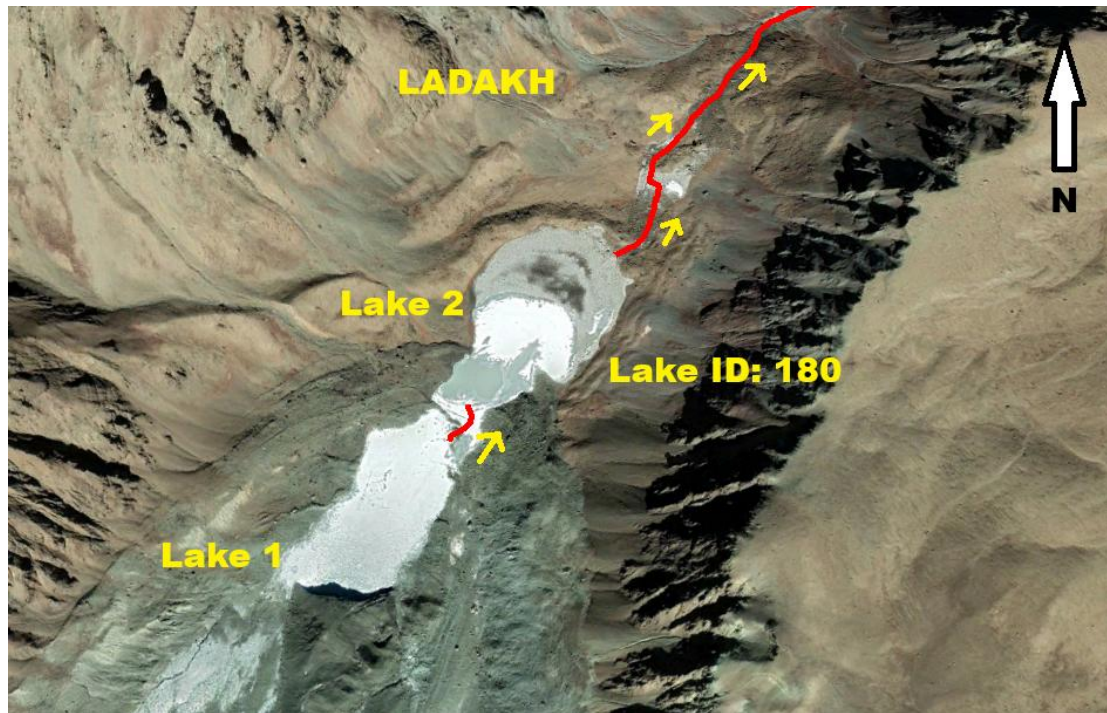


Figure 8.3: Flow path of cascading lakes of Lake ID:180

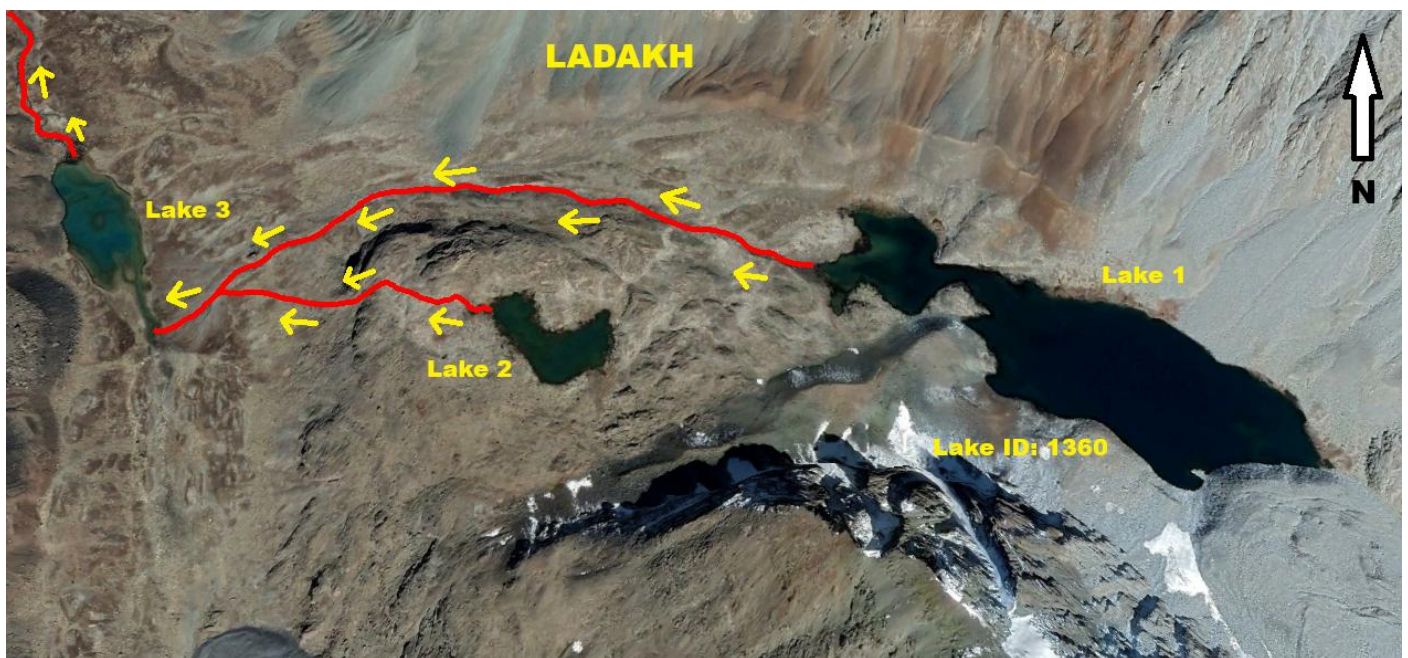


Figure 8.4: Flow path of cascading lakes of Lake ID:1360

8.3 Glacial Lake Cascades in Jammu & Kashmir

Five (5) glacial lake cascades were identified in the union territory of Jammu & Kashmir. The images showing the flow path of cascading lakes of J&K are shown in figures 8.5 to 8.9. The details of these glacial lakes are shown in Table 8.2.

Table 8.2: Details of Glacial Lakes depicting cascading effect in Jammu & Kashmir

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Inventory Area 2011 (ha) (I)	Lake Area October 2024 (Ha)
1	01_52C_002	NRSC	4092	33° 52' 10.2"	76° 7' 9.48"	Indus	Chenab	26	42
2	98	SDC	4103	34° 23' 31.2"	75° 5' 6"	Indus	Jhelum	-	#
3	182	SDC	4304	34° 14' 2.4"	75° 19' 30"	Indus	Jhelum	-	8
4	931	SDC	4082	33° 55' 44.4"	75° 23' 20.4"	Indus	Jhelum	-	21
5	1037	SDC	3603	34° 25' 19.2"	75° 3' 28.8"	Indus	Jhelum	-	40

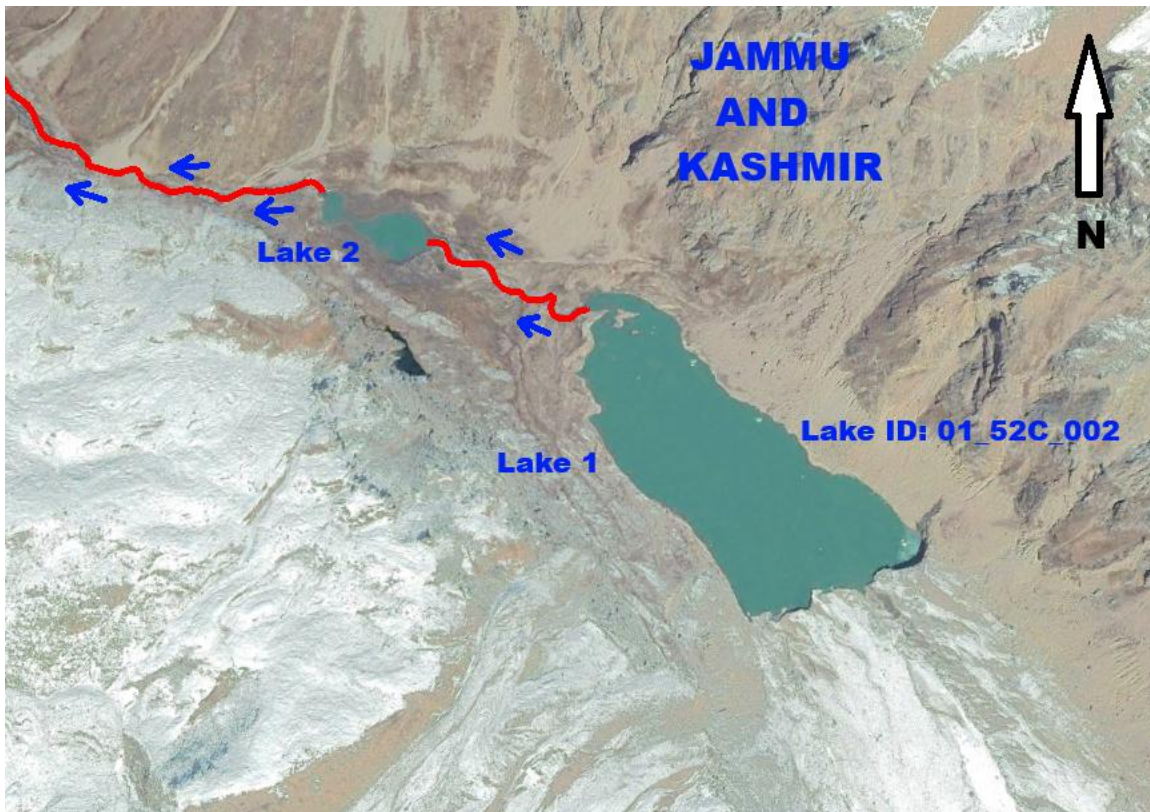


Figure 8.5: Flow path of cascading lakes of Lake ID:01_52C_002

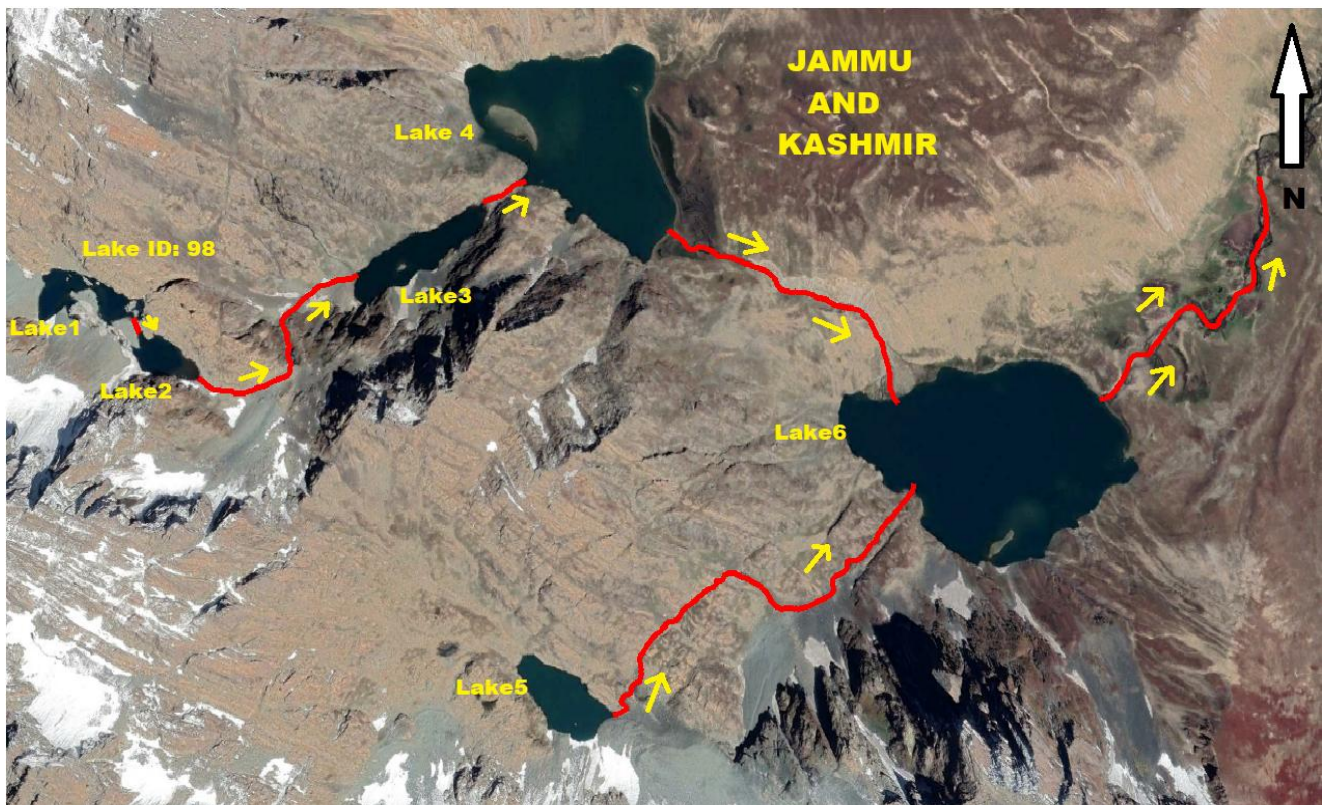


Figure 8.6: Flow path of cascading lakes of Lake ID:98



Figure 8.7: Flow path of cascading lakes of Lake ID:182

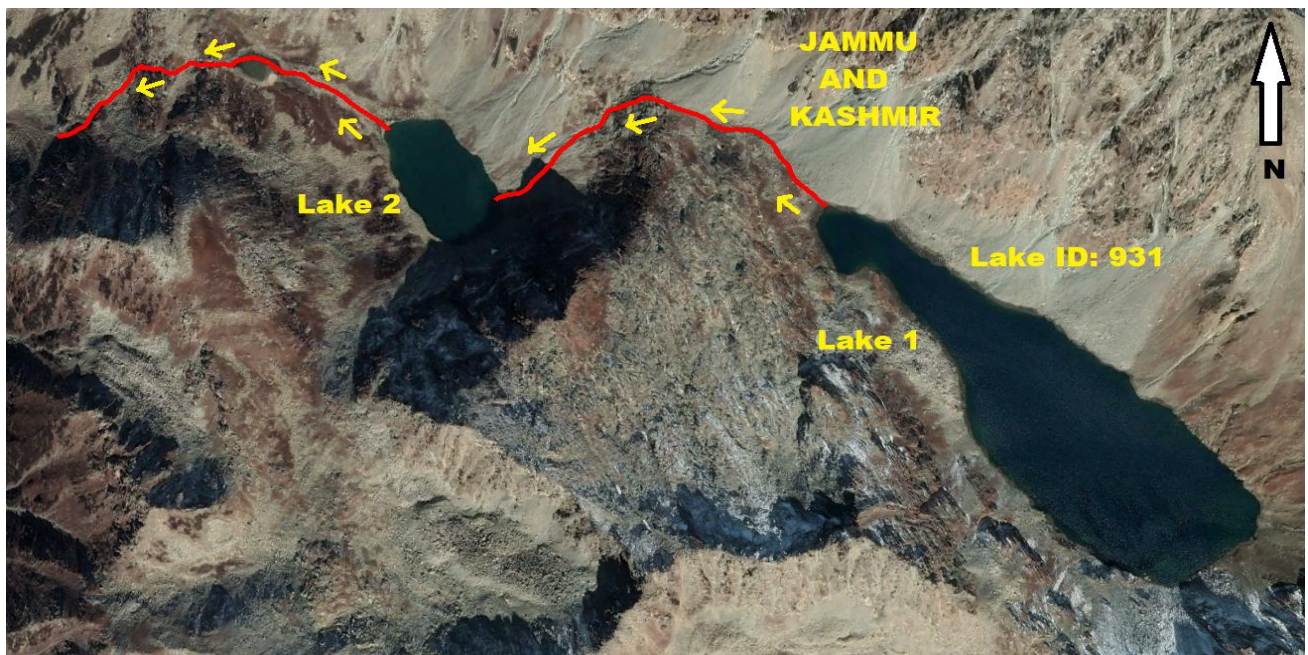


Figure 8.8: Flow path of cascading lakes of Lake ID:931

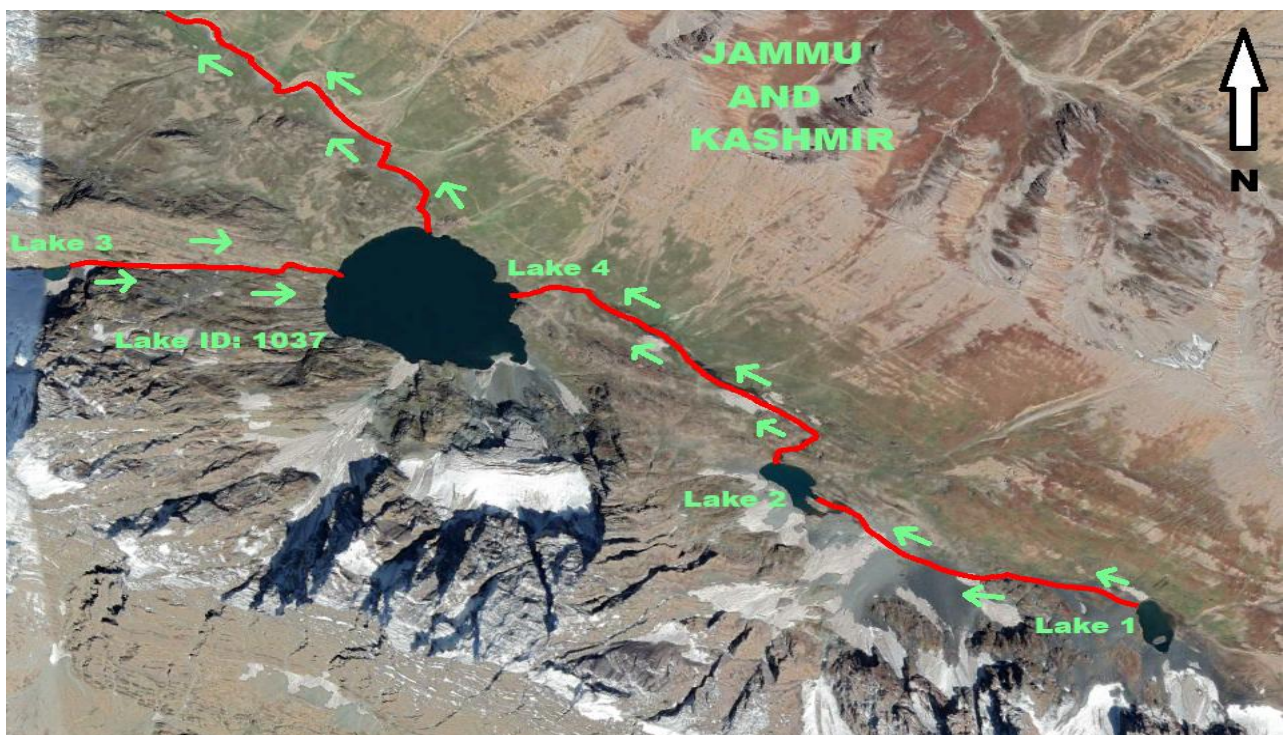


Figure 8.9: Flow path of cascading lakes of Lake ID:1037

8.4 Glacial Lake Cascade in Himachal Pradesh

One (1) glacial lake cascade was identified in the state of Himachal Pradesh. The image showing the flow path of the cascading lake of Himachal Pradesh is shown in figures 8.10. The details of these glacial lakes are shown in Table 8.3.

Table 8.3: Detail of Glacial Lake depicting cascading effect in Himachal Pradesh

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Lake Area October 2024 (Ha)
1	2031	SDC	4702	31° 20' 20.4"	78° 15' 10.8"	Indus	Satluj	12



Figure 8.10: Flow path of cascading lakes of Lake ID:2031

8.5 Glacial Lake Cascade in Uttarakhand

One glacial lake cascade was identified in the state of Uttarakhand. The image showing the flow path of the cascading lake of Uttarakhand is shown in figures 8.11. The details of these glacial lakes are shown in Table 8.4.

Table 8.4: Detail of Glacial Lake depicting cascading effect in Uttarakhand

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Inventory Area 2011 (ha) (i)	Lake Area October 2024 (Ha)
1	02_53N_001	NRSC	4688	30° 54' 7.92"	79° 45' 12.6"	Ganga	Ganga	21	22

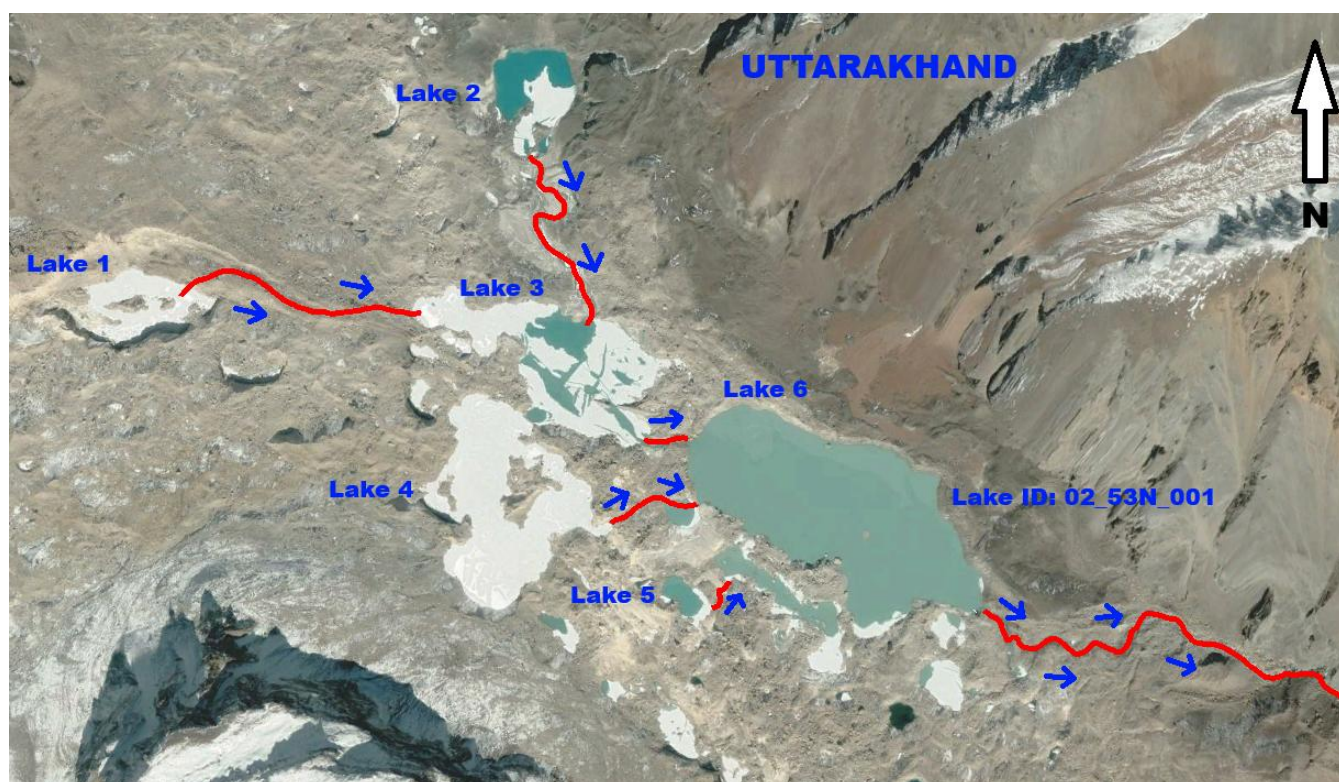


Figure 8.11: Flow path of cascading lakes of Lake ID:02_53N_001

8.6 Glacial Lake Cascades in Sikkim

Sikkim state hosts the maximum glacial lake cascades. **Seventeen (17)** glacial lake cascades were identified in the state of Sikkim. The images showing the flow path of cascading lakes of Sikkim are shown in figures 8.12 to 8.28. The details of these glacial lakes are shown in Table 8.5.

Table 8.5: Details of Glacial Lakes depicting cascading effect in Sikkim

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Inventory Area 2011 (ha) (i)	Lake Area October 2024 (Ha)
1	03_77D_006	NRSC/SDC	5084	28° 0' 51.84"	88° 33' 41.76"	Brahmaputra	Teesta	22	26
	03_77D_007	NRSC/SDC	5015	28° 0' 26.28"	88° 34' 18.48"	Brahmaputra	Teesta	24	25
2	03_78A_005	NRSC	5201	27° 58' 31.44"	88° 25' 20.64"	Brahmaputra	Teesta	11	14
	03_78A_006	NRSC	5004	27° 58' 15.6"	88° 25' 45.84"	Brahmaputra	Teesta	11	14
3	03_78A_007	NRSC/SDC	4977	27° 57' 38.88"	88° 38' 57.48"	Brahmaputra	Teesta	17	19
4	03_78A_008	NRSC	4998	27° 57' 3.24"	88° 21' 15.48"	Brahmaputra	Teesta	44	18
	03_78A_035	NRSC	4998	27° 57' 3.24"	88° 21' 15.48"	Brahmaputra	Teesta	-	45
5	03_78A_010	NRSC	5078	27° 57' 0.72"	88° 18' 16.92"	Brahmaputra	Teesta	36	36
6	03_78A_020	NRSC	5219	27° 52' 49.44"	88° 15' 4.68"	Brahmaputra	Teesta	14	14
7	03_78A_023	NRSC	4547	27° 40' 17.04"	88° 30' 46.44"	Brahmaputra	Teesta	33	34
8	227	SDC	5176	27° 59' 34.8"	88° 32' 49.2"	Brahmaputra	Teesta	-	68
9	237	SDC	5322	27° 59' 34.8"	88° 48' 3.6"	Brahmaputra	Teesta	-	9
	03_78A_001	NRSC/SDC	5371	27° 59' 30.12"	88° 48' 55.8"	Brahmaputra	Teesta	156	186
10	260	SDC	5253	27° 53' 38.4"	88° 45' 39.6"	Brahmaputra	Teesta	-	45
11	292	SDC	5577	28° 0' 21.6"	88° 39' 18"	Brahmaputra	Teesta	-	4
12	312	SDC	5137	27° 42' 3.6"	88° 30' 50.4"	Brahmaputra	Teesta	-	10
13	345	SDC	5108	27° 51' 50.4"	88° 44' 49.2"	Brahmaputra	Teesta	-	19
14	599	SDC	4251	27° 41' 42"	88° 42' 57.6"	Brahmaputra	Teesta	-	#
15	03_77D_002	NRSC	5156	28° 1' 33.96"	88° 42' 36"	Brahmaputra	Teesta	104	107
	03_77D_004	NRSC/SDC	5287	28° 0' 25.56"	88° 42' 46.08"	Brahmaputra	Teesta	106	122
	03_77D_005	NRSC/SDC	5249	28° 0' 32.76"	88° 41' 52.44"	Brahmaputra	Teesta	88	104
16	03_78A_009	NRSC	5044	27° 56' 51.72"	88° 19' 52.68"	Brahmaputra	Teesta	55	63
17	03_78A_013	NRSC	5470	27° 55' 7.68"	88° 9' 39.6"	Brahmaputra	Teesta	67	86
	03_78A_014	NRSC/SDC	5234	27° 54' 42.84"	88° 11' 54.96"	Brahmaputra	Teesta	123	142

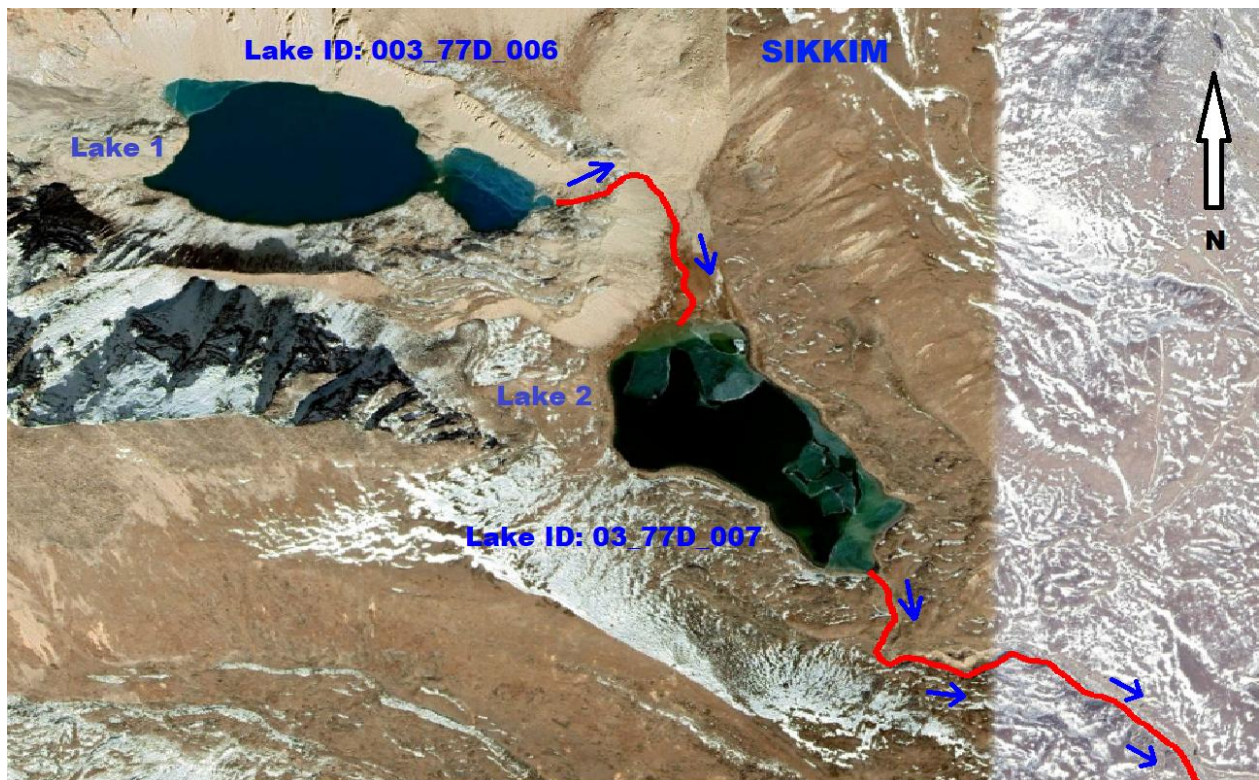


Figure 8.12: Flow path of cascading lakes of Lake ID:003_77D_006 & 03_78A_007

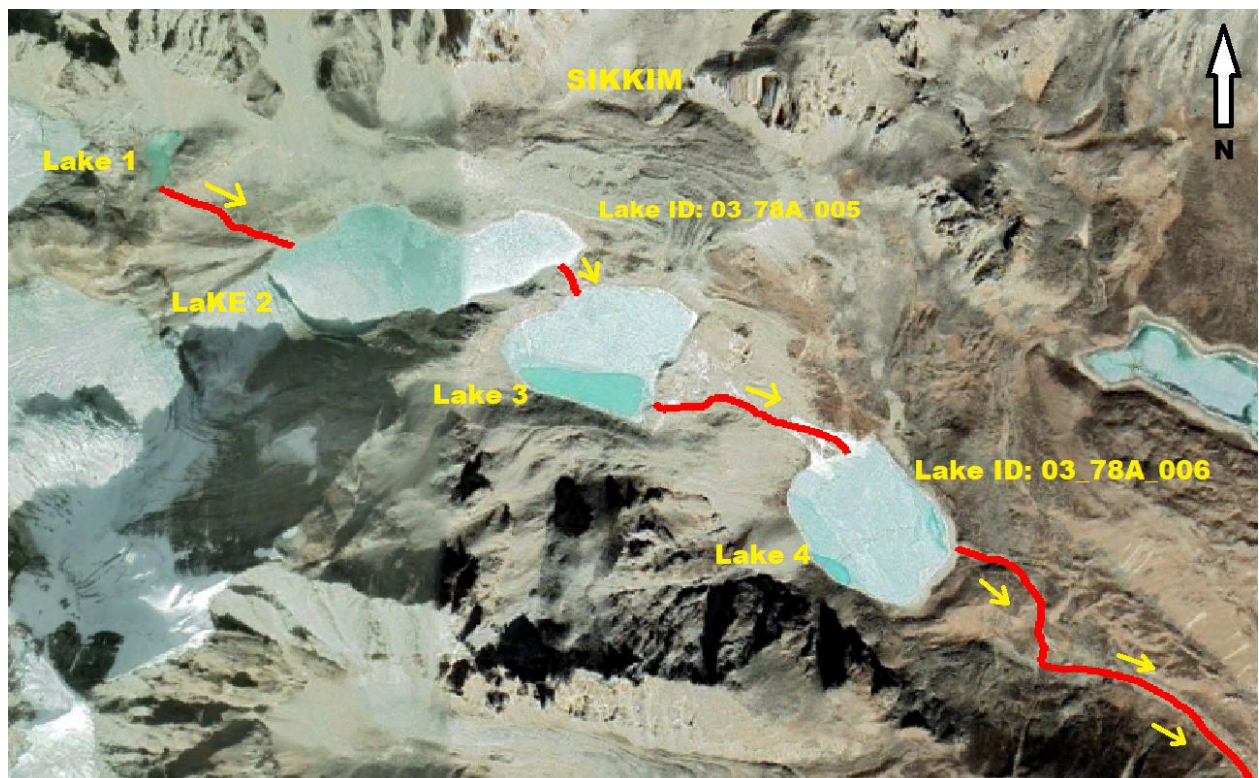


Figure 8.13: Flow path of cascading lakes of Lake ID:03_78A_005 & 03_78A_006



Figure 8.14: Flow path of cascading lakes of Lake ID:03_78A_007



Figure 8.15: Flow path of cascading lakes of Lake ID:03_78A_008 & 03_78A_035



Figure 8.16: Flow path of cascading lakes of Lake ID:03_78A_010

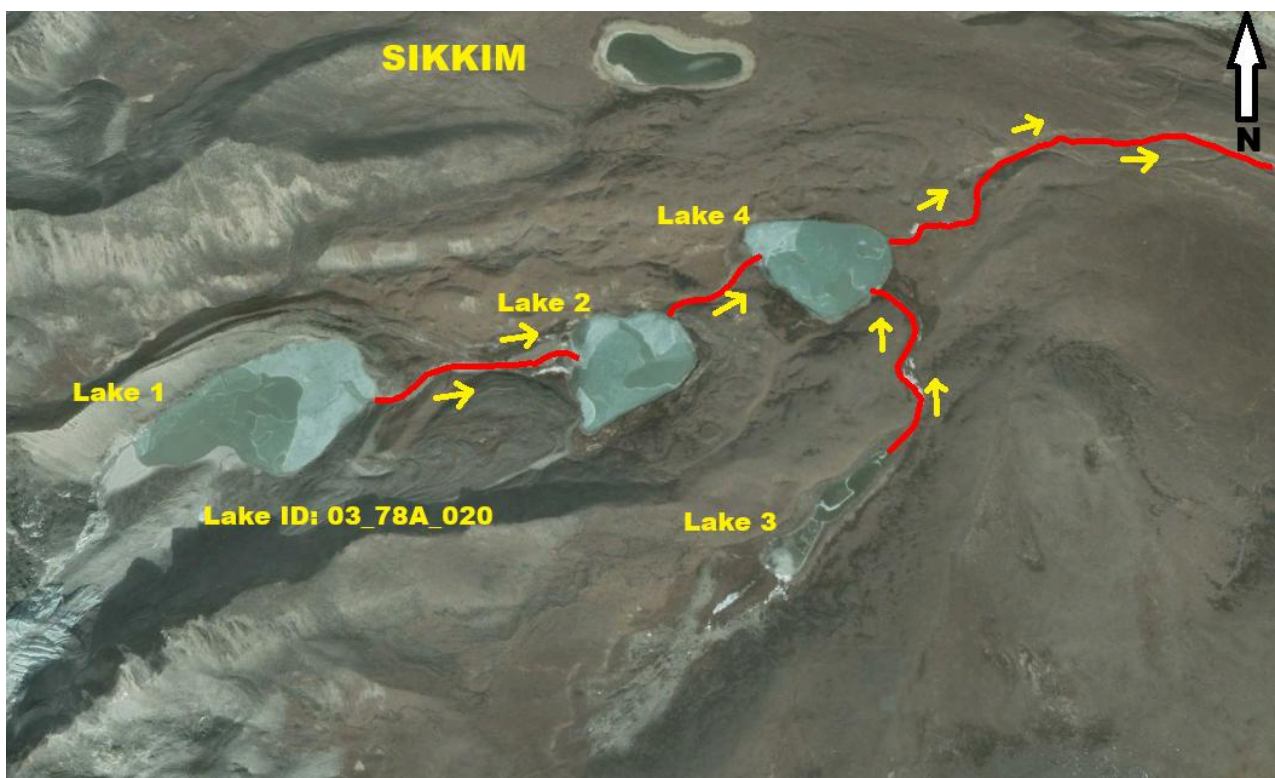


Figure 8.17: Flow path of cascading lakes of Lake ID:03_78A_020



Figure 8.18: Flow path of cascading lakes of Lake ID:03_78A_023



Figure 8.19: Flow path of cascading lakes of Lake ID:227

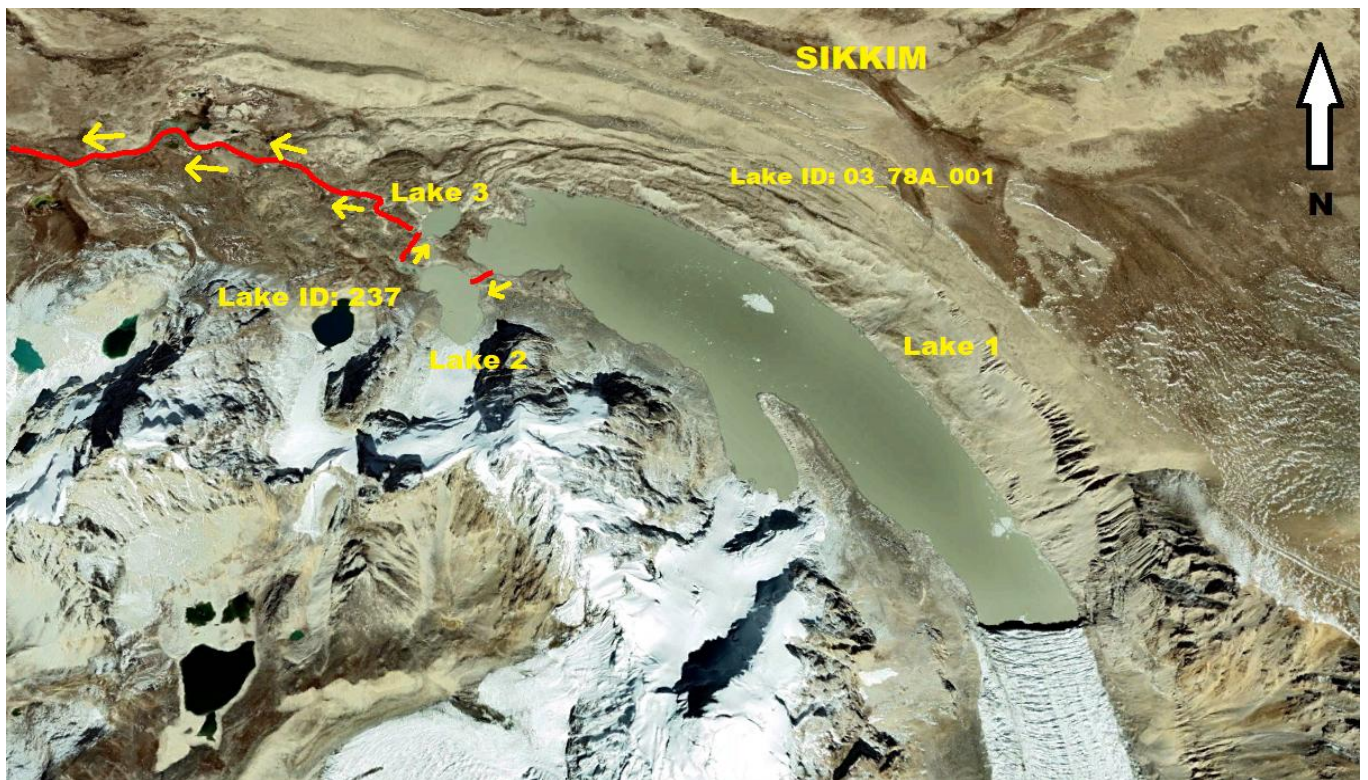


Figure 8.20: Flow path of cascading lakes of Lake ID: 237 & 03_78A_001

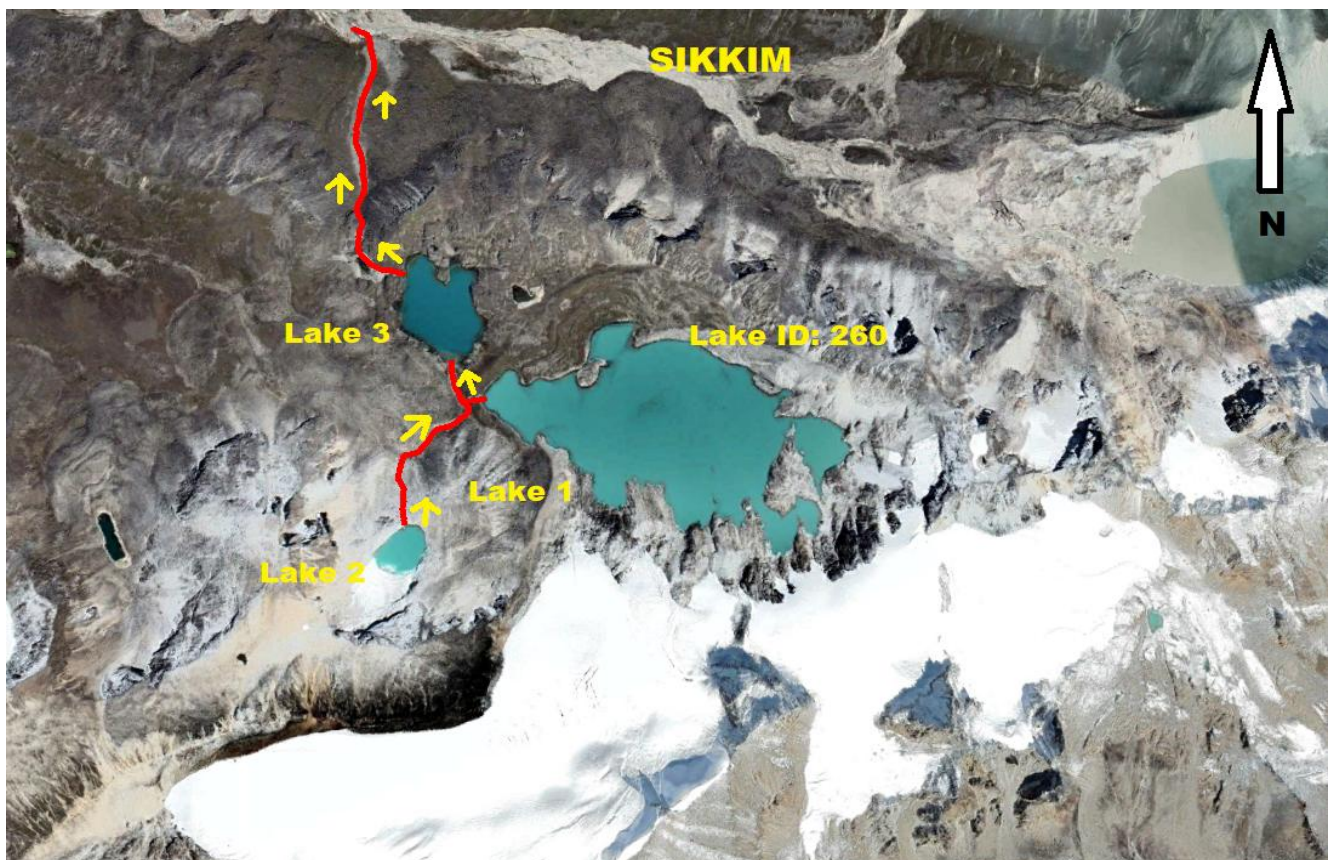


Figure 8.21: Flow path of cascading lakes of Lake ID:260



Figure 8.22: Flow path of cascading lakes of Lake ID:292



Figure 8.23: Flow path of cascading lakes of Lake ID:312

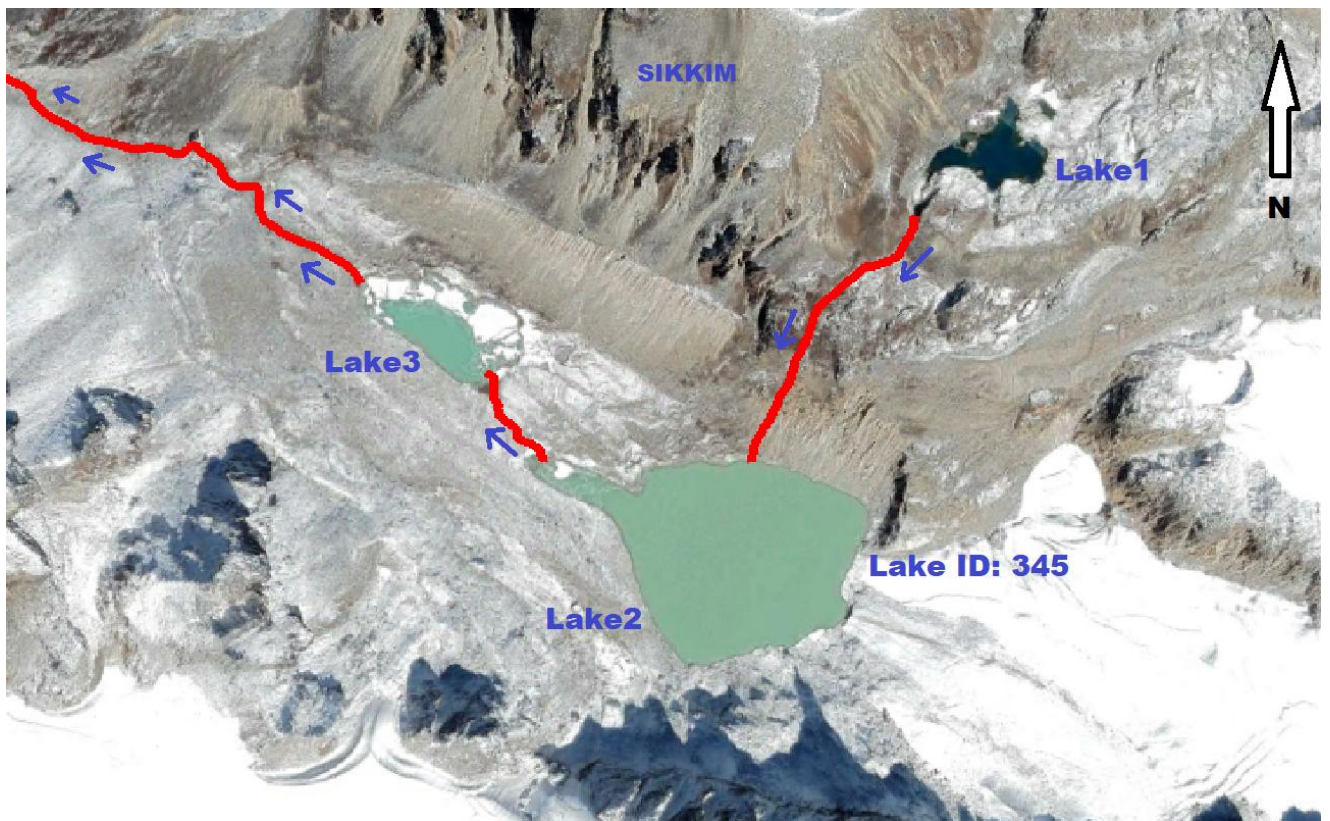


Figure 8.24: Flow path of cascading lakes of Lake ID:345

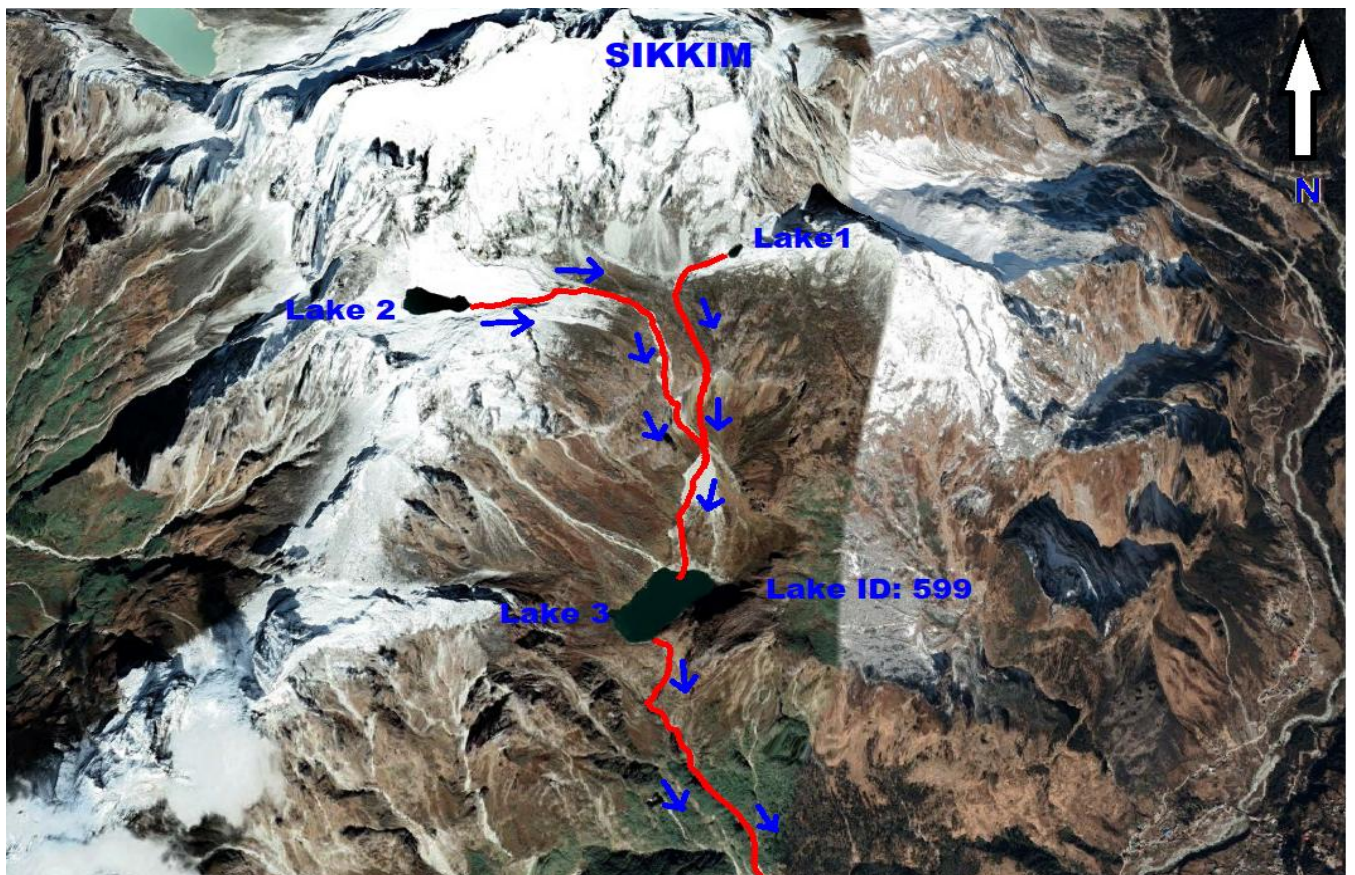


Figure 8.25: Flow path of cascading lakes of Lake ID:599

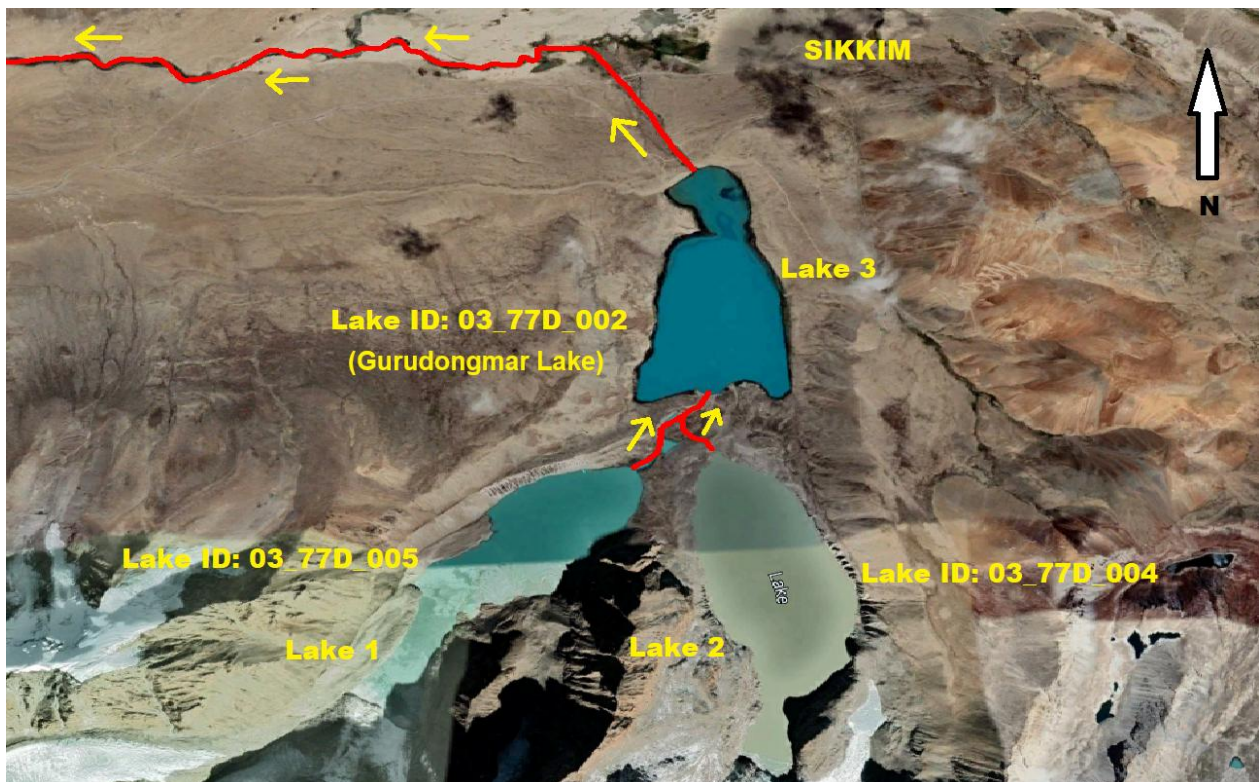


Figure 8.26: Flow path of cascading lakes of Lake ID:03_77D_002 & 03_77D_004 & 03_77D_005



Figure 8.27: Flow path of cascading lakes of Lake ID:03_78A_009

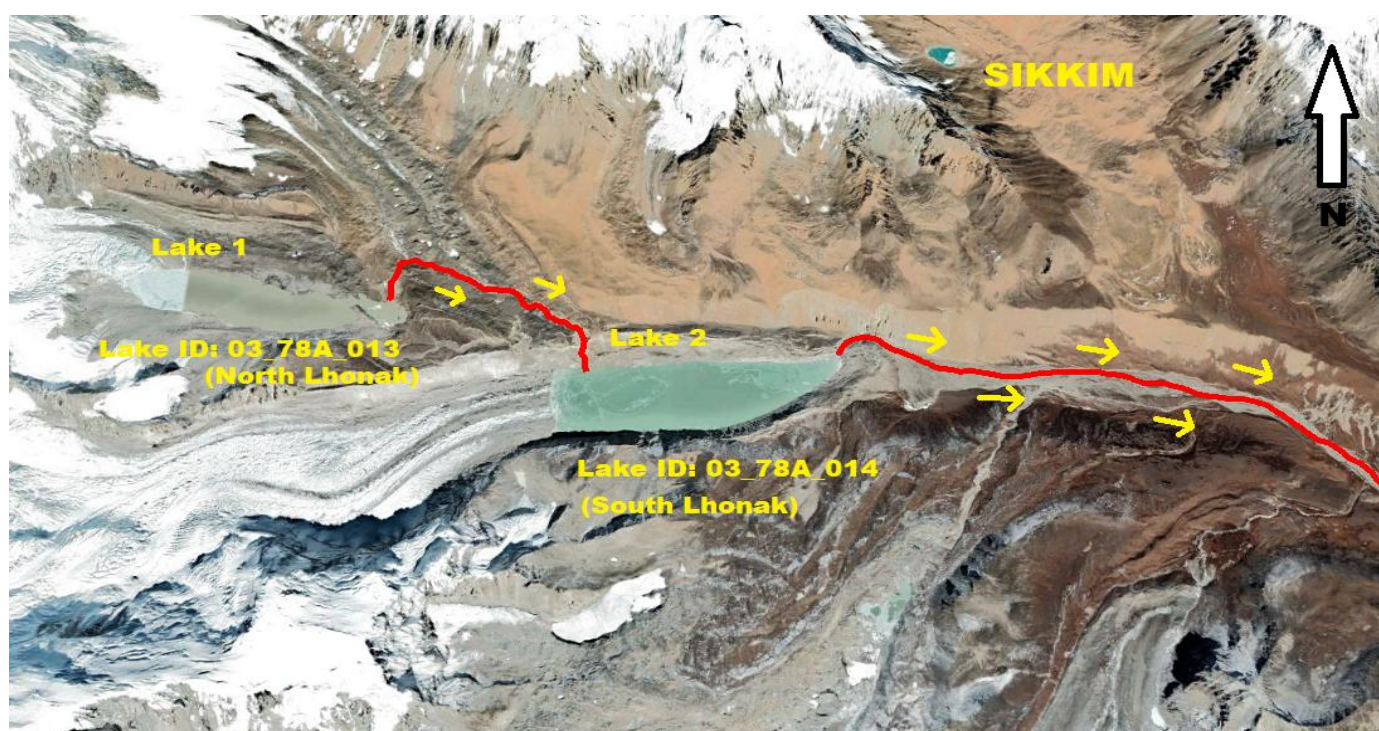


Figure 8.28: Flow path of cascading lakes of Lake ID:03_78A_013 & 03_78A_014

8.7 Glacial Lake Cascades in Arunachal Pradesh

Three (3) glacial lake cascades were identified in the state of Arunachal Pradesh. The images showing the flow path of cascading lakes of Arunachal Pradesh are shown in figures 8.29 to 8.31. The details of these glacial lakes are shown in Table 8.6.

Table 8.6: Details of Glacial Lakes depicting cascading effect in Arunachal Pradesh

No. of Cascades	Lake ID	Agency	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	Inventory Area 2011 (ha) (i)	Lake Area October 2024 (Ha)
1	03_83A_003	NRSC	5188	27° 46' 12.72"	92° 25' 56.64"	Brahma-putra	Dangme Chhu	24	86
	03_83A_004	NRSC	5109	27° 45' 47.16"	92° 25' 29.64"	Brahma-putra	Dangme Chhu	17	20
2	03_91H_073	NRSC	4481	28° 3' 15.48"	97° 19' 47.64"	Brahma-putra	Lohit	25	25
3	129	SDC	4895	27°46'24.165"	92°19'1.10"	Brahma-putra	Lohit	-	13

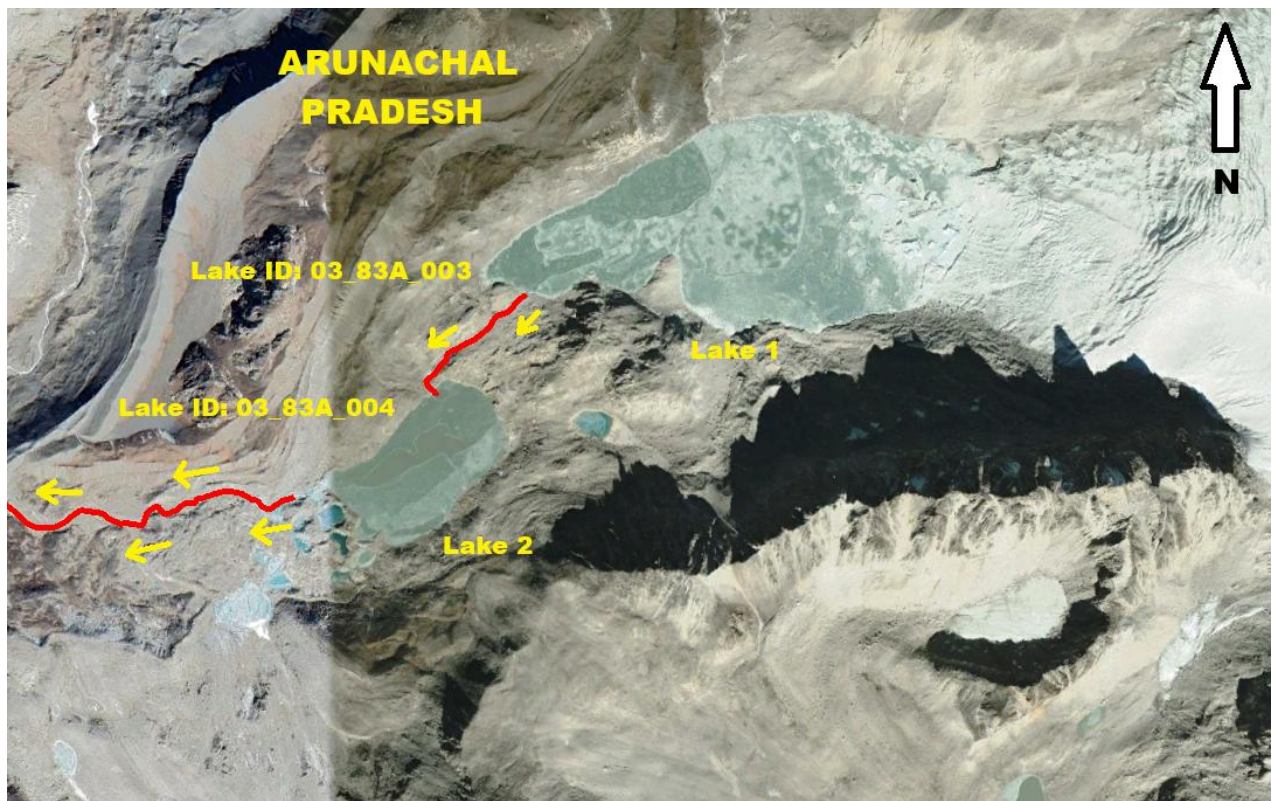


Figure 8.29: Flow path of cascading lakes of Lake ID:03_83A_003 & 03_78A_004



Figure 8.30: Flow path of cascading lakes of Lake ID:03_91H_073

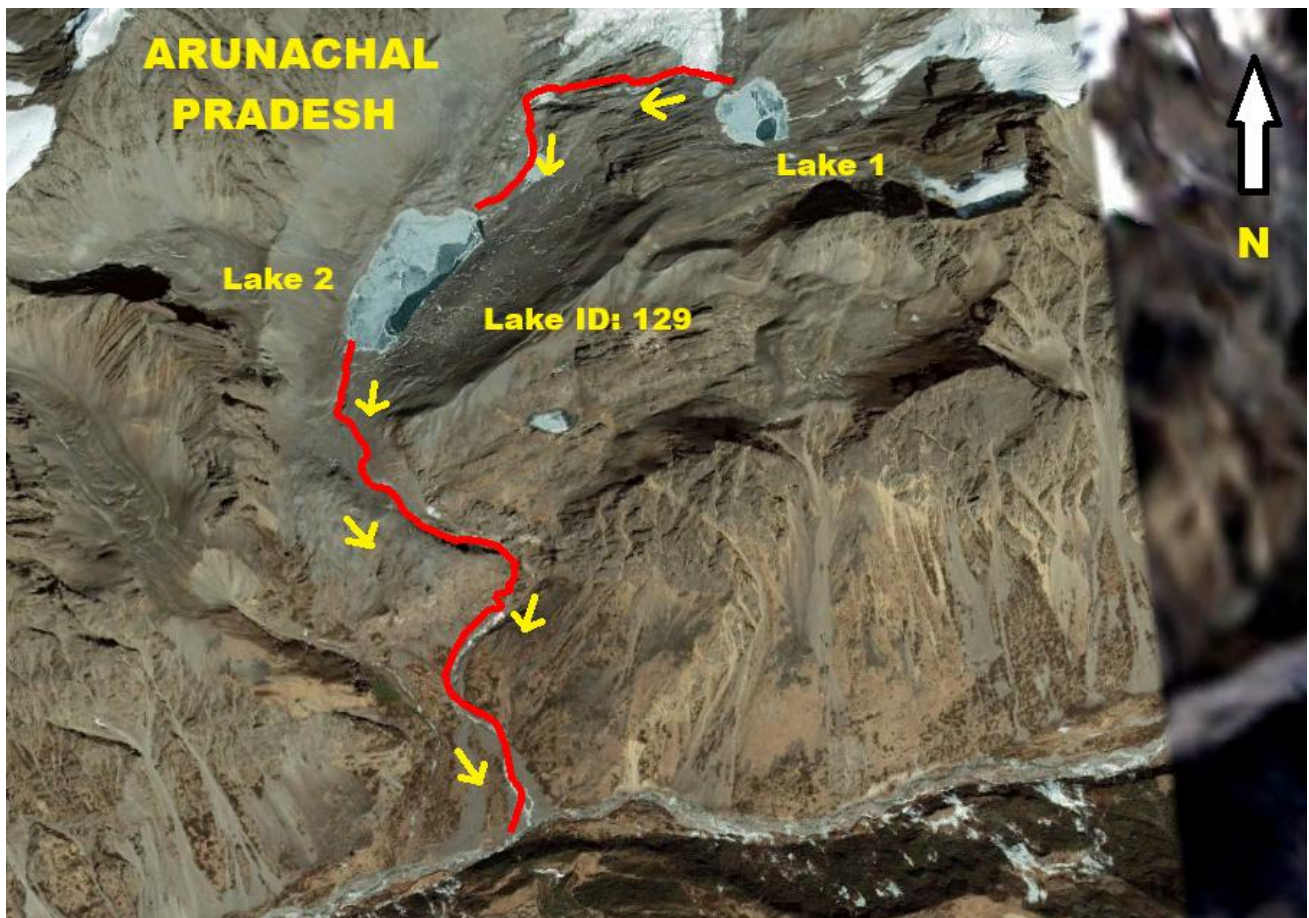


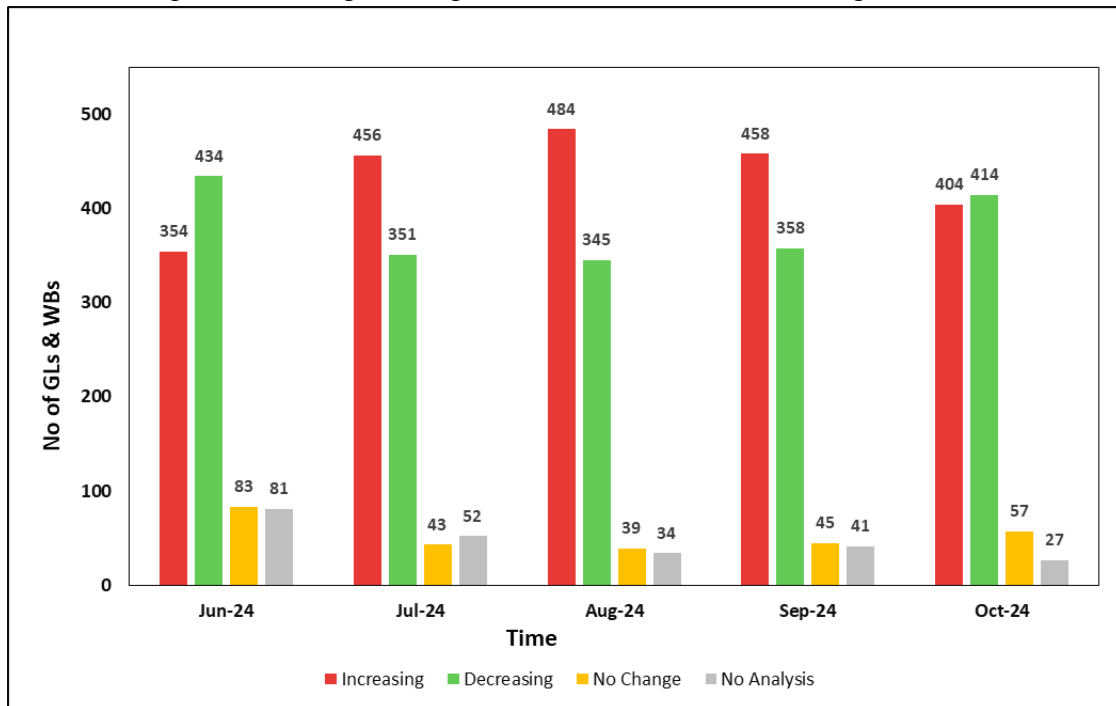
Figure 8.31: Flow path of cascading lakes of Lake ID:129

8.8 Conclusion

- 31 glacial lake cascades associated with monitored glacial lakes located in India were identified.
- The state/union territory-wise distribution is as follows
Ladakh – 4 Nos.
Jammu & Kashmir – 5 Nos.
Himachal Pradesh – 1 No.
Uttarakhand – 1 No.
Sikkim – 17 Nos.
Arunachal Pradesh – 3 Nos.
- Sikkim hosts the maximum number of glacial lake cascades (17 Nos.)
- Cascading glacial lakes require vigorous monitoring as GLOF of such lakes can cause unprecedented damage to downstream low lying areas and structures.

9.0 Conclusion

- For the year 2024, it can be interpreted that the number of glacial lakes and water bodies showing an increase in area showed a gradual increase from June to August and further started showing a decline. This may be due to melting of the surface of the frozen lake as well as the mother glacier feeding to the glacial lake. This is shown in Figure below.



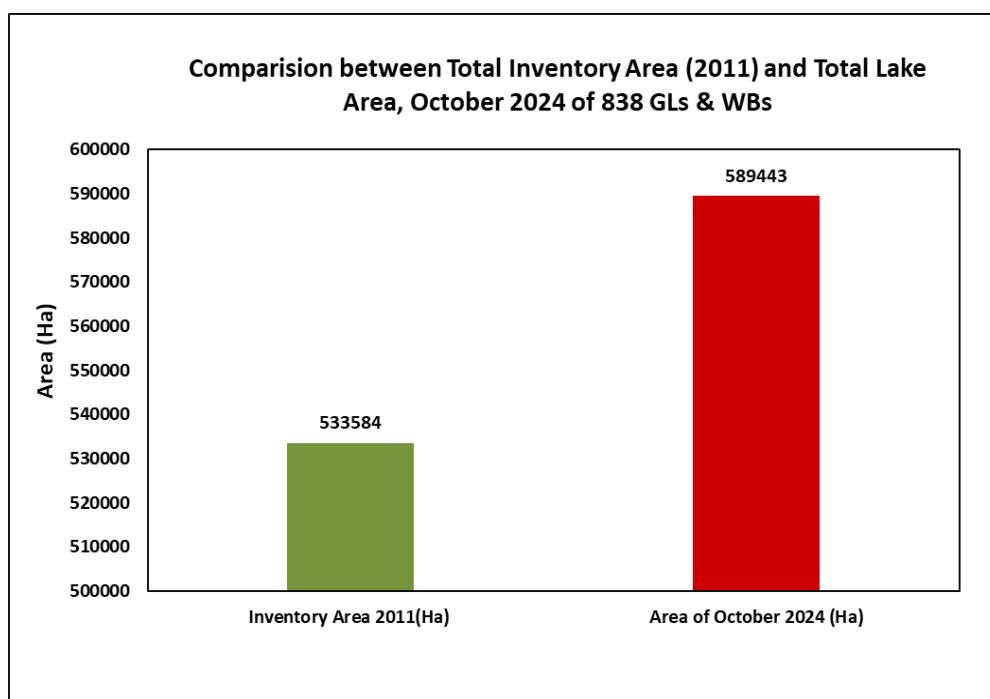
- Out of the **902 Glacial Lakes & Water Bodies** being monitored, few **GLs&WBs** have shown an increase in water spread **area greater than 40%** when change detection for 477 GLs&WBs was carried out with respect to base year (2011) as well as average annual water spread area of last ten years (2014-23), five years (2019-23) and remaining 425 GLs for average of two years (2022-23). Similarly, few Glacial lakes & Water Bodies have also shown decrease in **area greater than 40%**. The details are tabulated month-wise.

Monitoring Month	GLs&WBs depicting >40% increase in water spread area	GLs&WBs depicting >40% decrease in water spread area.
June 2024	17	28
July 2024	46	26
August 2024	30	18
September 2024	30	20
October 2024	31	26

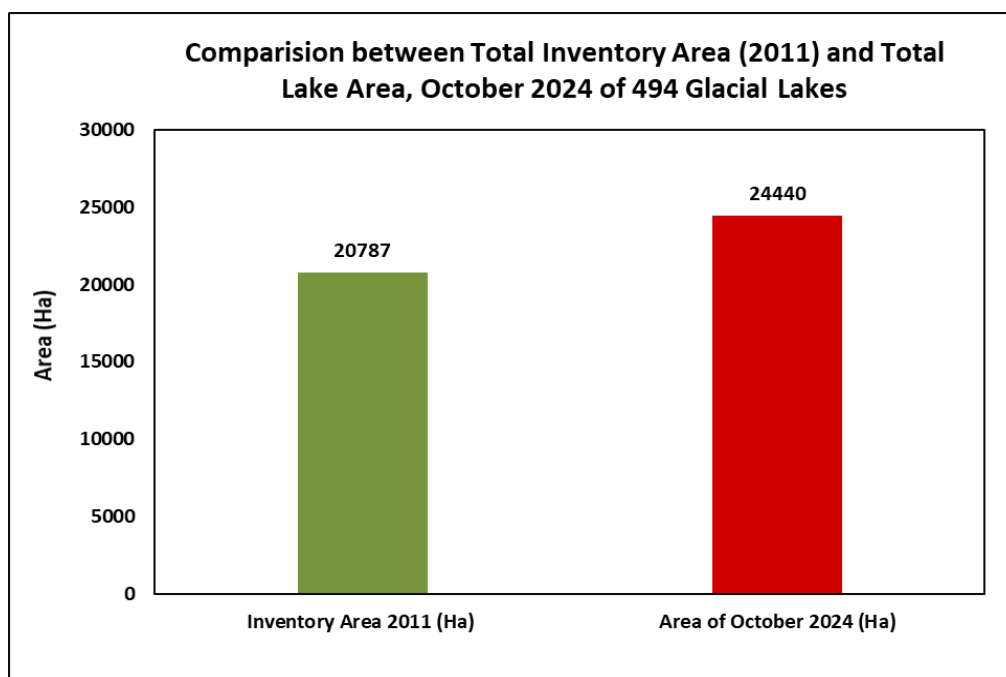
- Out of the **544 Glacial Lakes** being monitored, few Glacial Lakes depict an increase and decrease in water spread **area greater than 40%** when change detection was carried out for 119 GLs with respect to base year (2011) as well as average annual water spread area of last ten years (2014-23), five years (2019-23) and remaining 425 GLs for average of two years (2022-23). The details are tabulated month-wise.

Monitoring Month	GLs depicting >40% increase in water spread area	GLs depicting >40% decrease in water spread area.
June 2024	9	12
July 2024	33	11
August 2024	18	8
September 2024	16	10
October 2024	17	14

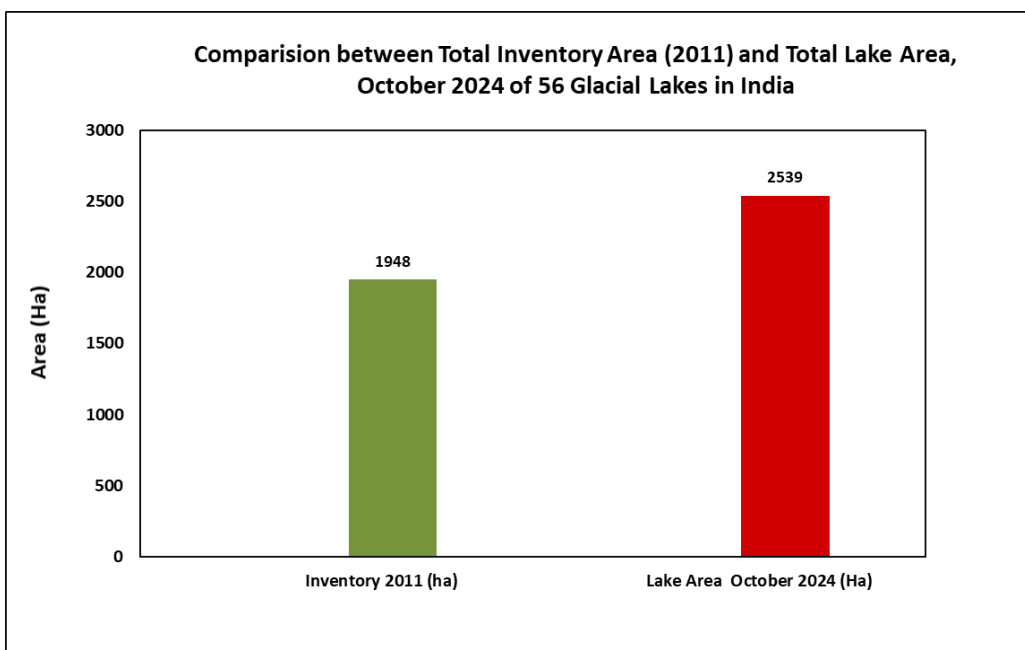
- The total Inventory area of **Glacial Lakes and Water Bodies** was 5,33,584 Ha during the year 2011 which has increased to 5,89,443 Ha during the year 2024 (October). There is a **10.46%** increase in area. *(Out of 902 GLs & WBs, only 838 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well GLS/WBs which were not analysed for the month of October, 2024.).* This is shown in Figure below.



- The total Inventory area of **Glacial Lakes** was 20,787 Ha during the year 2011 which has increased to 24,440 Ha during the year 2024 (October). There is a **17.57%** increase in area. *(Out of 544 GL, only 494 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well as lakes which were not analysed for the month of October, 2024.).* This is shown in Figure below.



- The total Inventory area of **Glacial Lakes within India** was 1,948 Ha during the year 2011 which has increased to 2,539 Ha during the year 2024 (October). There is a **30.34%** increase in area. *(Out of 100GL, only 56 lakes were considered for this interpretation. The remaining lakes include 40 SDC lakes which have no inventory details as well as 6 lakes which were not analysed for the month of October, 2024.).* This is shown in Figure below.



- Most of GLs & WBs exhibiting 40% or more increase in water spread area, are located in transboundary region.
- 26 nos. of Glacial Lakes & Water Bodies have been merged to 13 nos. of Glacial Lakes & Water Bodies & combined area of merged glacial lakes and water bodies has been shown against respective glacial lakes and water bodies. However, merging and

demerging of lakes is a dynamic process; hence figure of 902 Glacial Lakes & Water Bodies has been kept intact for analysis part.

- A total of 31 glacial lake cascades associated with monitored glacial lakes located in India were identified (Ladakh – 4 Nos., Jammu & Kashmir – 5 Nos., Himachal Pradesh – 1No., Uttarakhand – 1 No., Sikkim – 17 Nos., Arunachal Pradesh – 3 Nos.)
- The state of Sikkim hosts the maximum number of Glacial Lake cascades.
- Use of a combination of Microwave satellite images in conjunction with multispectral satellite images (MSI) has largely overcome the short-comings due to obscurity from cloud cover and this has led to almost all-time and all-weather monitoring of all 902 Lakes. This has increased availability of satellite images at shorter frequency interval and will facilitate in reducing the monitoring interval in future.
- The use of Sentinel satellite images has brought the improvement of spatial resolution from 56m to 10m leading to enhancement of monitoring accuracy. Sentinel images have also aided in improving temporal resolution.

Table No.5.1: Results of Analysis of Glacial Lakes within India for the year 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_42H_002	NRSC	162I		2763	36° 38' 34.8"	73° 24' 26.64"	Indus	Gilgit	Ladakh	13	17	16	18	18	17	16	18	17	No Change
2	01_52A_002	NRSC			4537	35° 5' 48.12"	76° 14' 0.6"	Indus	Shyok	Ladakh	23	22	23	23	23	22	22	23	23	No Change
3	01_52A_003	NRSC			4586	35° 5' 33.36"	76° 15' 7.2"	Indus	Shyok	Ladakh	24	17	27	26	16	14	14	27	20	Decreasing
4	01_52A_004	NRSC /SDC	/Very High Risk		4619	35° 4' 28.2"	76° 17' 33.72"	Indus	Shyok	Ladakh	11	10	10	10	11	11	10	11	10	Increasing
5	01_52B_010	NRSC /SDC	75I/Medium Risk		5122	34° 3' 6.48"	76° 43' 5.16"	Indus	Indus	Ladakh	18	17	17	17	17	17	17	17	17	No Change
6	01_52B_012	NRSC	129I		5137	34° 0' 19.8"	76° 47' 12.84"	Indus	Indus	Ladakh	17	13	15	15	16	15	13	16	15	Increasing
7	01_52C_001	NRSC	11I		4394	33° 56' 44.52"	76° 13' 53.76"	Indus	Shingo (Indus)	Ladakh	36	54	51	51	53	51	51	54	52	Decreasing
8	01_52C_003	NRSC	7I	JK_187	4512	33° 9' 26.28"	76° 59' 3.48"	Indus	Indus	Ladakh	45	58	57	58	58	57	57	58	58	No Change
9	01_52E_001	NRSC		JK_188	5116	35° 25' 4.8"	77° 36' 16.56"	Indus	Shyok	Ladakh	51	#	#	#	#	#	#	#	#	No Analysis
10	01_52J_001	NRSC	8I	JK_197	5311	34° 27' 27.72"	78° 8' 6.36"	Indus	Shyok	Ladakh	97	99	102	104	98	96	96	104	100	No Change
11	01_52L_006	NRSC	306I		5727	32° 26' 27.24"	78° 55' 29.28"	Indus	Indus	Ladakh	12	9	11	11	11	11	9	11	11	Increasing
12	01_52L_007	NRSC	184I		5498	32° 24' 36.36"	78° 53' 56.4"	Indus	Indus	Ladakh	32	39	35	34	34	31	31	39	35	Decreasing
13	173	SDC	Medium Risk		5150	34° 45' 54"	76° 42' 36"	Indus		Ladakh		#	11	10	9	9	9	11	10	Decreasing
14	180	SDC	Very High Risk		4442	34° 21' 10.8"	76° 4' 37.2"	Indus		Ladakh	-	#	19	18	16	16	16	19	17	Decreasing
15	1360	SDC	Very High Risk		4667	35° 1' 37.2"	75° 43' 30"	Indus		Ladakh		14	15	14	12	14	12	15	14	No Change
16	01_43J_003	NRSC			3954	34° 55' 36.12"	74° 9' 19.44"	Indus	Jhelum	Jammu & Kashmir	20	#	#	15	48	20	15	48	28	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
17	01_52C_002	NRSC	46I		4092	33° 52' 10.2"	76° 7' 9.48"	Indus	Chenab	Jammu & Kashmir	26	43	43	45	44	42	42	45	43	No Change
18	27	SDC	Very High Risk		3775	34° 22' 51.6"	74° 52' 33.6"	Indus		Jammu & Kashmir	-	#	7	#	11	11	7	11	10	Increasing
19	98	SDC	High Risk		4103	34° 23' 31.2"	75° 5' 6"	Indus		Jammu & Kashmir	-	#	#	#	5	#	5	5	5	No Analysis
20	182	SDC	Very High Risk		4304	34° 14' 2.4"	75° 19' 30"	Indus		Jammu & Kashmir	-	#	8	9	8	8	8	9	8	No Change
21	931	SDC	Very High Risk		4082	33° 55' 44.4"	75° 23' 20.4"	Indus		Jammu & Kashmir	-	#	22	20	22	21	20	22	21	No Change
22	938	SDC	Very High Risk		3683	33° 57' 10.8"	75° 22' 40.8"	Indus		Jammu & Kashmir	-	19	20	14	19	20	14	20	18	No Change
23	951	SDC	Very High Risk		3762	34° 4' 1.2"	75° 28' 30"	Indus		Jammu & Kashmir	-	#	17	18	18	17	17	18	18	No Change
24	958	SDC	Very High Risk		4103	34° 8' 16.8"	75° 24' 57.6"	Indus		Jammu & Kashmir	-	8	10	9	8	9	8	10	9	No Change
25	963	SDC	Medium Risk		3725	34° 8' 20.4"	75° 22' 33.6"	Indus		Jammu & Kashmir	-	31	29	31	31	30	29	31	30	No Change
26	976	SDC	High Risk/15I		4314	34° 11' 6"	75° 22' 19.2"	Indus		Jammu & Kashmir	-	#	19	19	18	18	18	19	19	Decreasing
27	993	SDC	Very High Risk		4148	34° 13' 37.2"	75° 13' 19.2"	Indus		Jammu & Kashmir	-	#	6	7	5	5	5	7	6	Decreasing
28	1014	SDC	Very High Risk		3989	34° 17' 56.4"	75° 3' 36"	Indus		Jammu & Kashmir	-	#	4	3	2	2	2	4	3	Decreasing
29	1032	SDC	Very High Risk		4007	34° 23' 9.6"	75° 3' 50.4"	Indus		Jammu & Kashmir	-	#	2	#	1	1	1	2	1	Decreasing
30	1037	SDC	Medium Risk/27I		3603	34° 25' 19.2"	75° 3' 28.8"	Indus		Jammu & Kashmir	-	#	#	38	38	40	38	40	39	No Change
31	01_52H_002	NRSC /SDC	4I/Very High Risk	HP_3	4101	32° 31' 28.92"	77° 13' 5.88"	Indus	Chenab	Himachal Pradesh	62	100	104	103	102	101	100	104	102	No Change
32	01_52H_003	NRSC			4165	32° 29' 54.6"	77° 32' 37.32"	Indus	Chenab	Himachal Pradesh	28	170	95	166	167	154	95	170	150	Decreasing
33	01_52H_004	NRSC		HP_5	4155	32° 29' 47.04"	77° 33' 5.76"	Indus	Chenab	Himachal Pradesh	46	154	167	166	167	154	154	167	162	No Change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
34	01_53I_002	NRSC /SDC	26I/Very High Risk		4273	31° 39' 38.52"	78° 10' 1.92"	Indus	Sutlej	Himachal Pradesh	23	34	34	36	30	29	29	36	33	Decreasing
35	1774	SDC	Very High Risk		4593	32° 13' 15.6"	76° 47' 16.8"	Indus		Himachal Pradesh	-	#	12	9	8	8	8	12	9	Decreasing
36	1805	SDC	Very High Risk/81I		4775	32° 45' 43.2"	77° 11' 42"	Indus		Himachal Pradesh	-	5	6	5	5	4	4	6	5	Decreasing
37	1847	SDC	Very High Risk		4570	31° 54' 54"	77° 31' 37.2"	Indus		Himachal Pradesh	-	13	14	14	12	12	12	14	13	Decreasing
38	1936	SDC	Very High Risk/321I		4606	32° 15' 21.6"	76° 46' 37.2"	Indus		Himachal Pradesh	-	#	#	4	3	2	2	4	3	Decreasing
39	1998	SDC	Very High Risk		3857	32° 19' 12"	76° 54' 28.8"	Indus		Himachal Pradesh	-	#	#	#	1	1	1	1	1	No Change
40	2031	SDC	Very High Risk		4702	31° 20' 20.4"	78° 15' 10.8"	Indus		Himachal Pradesh	-	#	12	11	12	12	11	12	12	No Change
41	01_62B_003	NRSC	86I		5288	30° 28' 36.48"	80° 35' 35.16"	Indus	Sutlej	Uttarakhand	12	13	14	14	15	14	13	15	14	Increasing
42	02_53N_001	NRSC	250G		4688	30° 54' 7.92"	79° 45' 12.6"	Ganga	Ganga	Uttarakhand	21	21	21	24	23	22	21	24	22	Increasing
43	02_62B_004	NRSC	232G		4918	30° 33' 52.2"	80° 10' 41.16"	Ganga	Sarda	Uttarakhand	19	18	29	28	31	30	18	31	27	Increasing
44	02_62B_005	NRSC	580G		4314	30° 26' 44.52"	80° 23' 16.08"	Ganga	Sarda	Uttarakhand	12	11	13	12	12	12	11	13	12	No Change
45	02_62B_007	NRSC			4839	30° 16' 42.96"	80° 7' 49.8"	Ganga	Sarda	Uttarakhand	19	#	#	#	#	#	#	#	#	No Analysis
46	2108	SDC	Very High Risk/347G		5587	30° 58' 33.6"	79° 27' 32.4"	Ganga		Uttarakhand	-	22	18	22	20	18	18	22	20	Decreasing
47	2147	SDC	Medium Risk		5688	30° 58' 48"	79° 29' 13.2"	Ganga		Uttarakhand	-	#	#	#	#	#	#	#	#	No Analysis
48	2207	SDC	Very High Risk		4707	30° 54' 43.2"	78° 57' 28.8"	Ganga		Uttarakhand	-	13	12	11	12	8	8	13	11	Decreasing
49	2299	SDC	Very High Risk		4490	30° 11' 2.4"	79° 52' 48"	Ganga		Uttarakhand	-	#	#	#	#	#	#	#	#	No Analysis
50	03_77D_002	NRSC		SK_2	5156	28° 1' 33.96"	88° 42' 36"	Brahma-putra	Teesta	Sikkim	105	107	113	108	104	107	104	113	108	No Change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
51	03_77D_004	NRSC /SDC	/Very High Risk	SK_4	5287	28° 0' 25.56"	88° 42' 46.08"	Brahma-putra	Teesta	Sikkim	106	130	116	117	120	122	116	130	121	Decreasing
52	03_77D_005	NRSC /SDC	/Very High Risk	SK_5	5249	28° 0' 32.76"	88° 41' 52.44"	Brahma-putra	Teesta	Sikkim	79	114	85	111	110	104	85	114	105	No Change
53	03_77D_006	NRSC /SDC	/Very High Risk		5084	28° 0' 51.84"	88° 33' 41.76"	Brahma-putra	Teesta	Sikkim	22	19	29	28	26	26	19	29	26	Increasing
54	03_77D_007	NRSC /SDC	/Very High Risk		5015	28° 0' 26.28"	88° 34' 18.48"	Brahma-putra	Teesta	Sikkim	24	27	27	26	29	25	25	29	27	No Change
55	03_77D_008	NRSC		SK_8	5039	28° 0' 26.28"	88° 29' 41.64"	Brahma-putra	Teesta	Sikkim	46	43	41	46	42	43	41	46	43	No Change
56	03_78A_001	NRSC /SDC	/High Risk	SK_9	5371	27° 59' 30.12"	88° 48' 55.8"	Brahma-putra	Teesta	Sikkim	156	175	184	184	184	186	175	186	183	Increasing
57	03_78A_002	NRSC /SDC	/Very High Risk		4952	27° 58' 56.28"	88° 30' 28.08"	Brahma-putra	Teesta	Sikkim	22	41	#	37	35	37	35	41	38	Decreasing
58	03_78A_003	NRSC /SDC	/Very High Risk	SK_11	4977	27° 58' 31.08"	88° 36' 59.04"	Brahma-putra	Teesta	Sikkim	58	54	34	59	57	58	34	59	52	Increasing
59	03_78A_005	NRSC			5201	27° 58' 31.44"	88° 25' 20.64"	Brahma-putra	Teesta	Sikkim	11	12	13	10	13	14	10	14	12	Increasing
60	03_78A_006	NRSC			5004	27° 58' 15.6"	88° 25' 45.84"	Brahma-putra	Teesta	Sikkim	11	15	15	14	14	14	14	15	14	Decreasing
61	03_78A_007	NRSC /SDC	/Very High Risk		4977	27° 57' 38.88"	88° 38' 57.48"	Brahma-putra	Teesta	Sikkim	17	18	22	19	19	19	18	22	19	No Change
62	03_78A_008	NRSC			4998	27° 57' 3.24"	88° 21' 15.48"	Brahma-putra	Teesta	Sikkim	44	19	18	19	19	18	18	19	19	No Change
63	03_78A_009	NRSC		SK_16	5044	27° 56' 51.72"	88° 19' 52.68"	Brahma-putra	Teesta	Sikkim	54	64	68	62	65	63	62	68	64	No Change
64	03_78A_010	NRSC			5078	27° 57' 0.72"	88° 18' 16.92"	Brahma-putra	Teesta	Sikkim	36	37	41	38	37	36	36	41	38	No Change
65	03_78A_012	NRSC			5130	27° 54' 4.32"	88° 46' 54.84"	Brahma-putra	Teesta	Sikkim	26	29	30	30	27	29	27	30	29	No Change
66	03_78A_013	NRSC		SK_19	5470	27° 55' 7.68"	88° 9' 39.6"	Brahma-putra	Teesta	Sikkim	63	88	82	87	79	86	79	88	84	Decreasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
67	03_78A_014	NRSC /SDC	/Very High Risk	SK_20	5234	27° 54' 42.84"	88° 11' 54.96"	Brahma-putra	Teesta	Sikkim	94	141	154	135	136	142	135	154	142	No Change
68	03_78A_015	NRSC /SDC	/Medium Risk		4970	27° 52' 23.88"	88° 47' 22.2"	Brahma-putra	Teesta	Sikkim	12	11	11	11	11	11	11	11	11	No Change
69	03_78A_016	NRSC			5451	27° 53' 33.72"	88° 12' 47.16"	Brahma-putra	Teesta	Sikkim	14	#	20	13	9	#	9	20	14	Decreasing
70	03_78A_017	NRSC			5545	27° 53' 34.8"	88° 11' 31.92"	Brahma-putra	Teesta	Sikkim	19	23	28	30	29	30	23	30	28	Increasing
71	03_78A_019	NRSC /SDC	/Very High Risk		4809	27° 51' 52.2"	88° 51' 46.44"	Brahma-putra	Teesta	Sikkim	15	11	13	13	13	15	11	15	13	Increasing
72	03_78A_020	NRSC			5219	27° 52' 49.44"	88° 15' 4.68"	Brahma-putra	Teesta	Sikkim	14	13	13	13	15	14	13	15	14	Increasing
73	03_78A_021	NRSC		SK_26	5431	27° 49' 28.2"	88° 14' 57.12"	Brahma-putra	Teesta	Sikkim	56	87	94	97	95	96	87	97	94	Increasing
74	03_78A_023	NRSC			4547	27° 40' 17.04"	88° 30' 46.44"	Brahma-putra	Teesta	Sikkim	33	33	23	32	33	34	23	34	31	No Change
75	03_78A_026	NRSC			4736	27° 33' 44.28"	88° 7' 24.96"	Brahma-putra	Teesta	Sikkim	11	10	12	11	11	11	10	12	11	Increasing
76	03_78A_027	NRSC /SDC	/Very High Risk		4888	27° 32' 0.6"	88° 5' 8.52"	Brahma-putra	Teesta	Sikkim	33	#	38	41	41	38	38	41	40	No Change
77	03_78A_031	NRSC			4305	27° 26' 15"	88° 5' 9.6"	Brahma-putra	Teesta	Sikkim	14	12	13	12	14	13	12	14	13	Increasing
78	03_78A_035	NRSC			4998	27° 57' 3.24"	88° 21' 15.48"	Brahma-putra	Teesta	Sikkim	-	11	15	13	42	45	11	45	25	Increasing
79	227	SDC	Very High Risk		5176	27° 59' 34.8"	88° 32' 49.2"	Brahma-putra		Sikkim	-	66	67	65	62	68	62	68	66	No Change
80	237	SDC	Very Low Risk		5322	27° 59' 34.8"	88° 48' 3.6"	Brahma-putra		Sikkim	-	10	10	10	9	9	9	10	10	Decreasing
81	256	SDC	High risk		4615	27° 48' 57.6"	88° 39' 25.2"	Brahma-putra		Sikkim	-	13	14	14	14	16	13	16	14	Increasing
82	260	SDC	Medium Risk		5253	27° 53' 38.4"	88° 45' 39.6"	Brahma-putra		Sikkim	-	45	46	45	42	45	42	46	45	No Change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
83	292	SDC	Medium Risk		5577	28° 0' 21.6"	88° 39' 18"	Brahma-putra		Sikkim	-	5	#	5	4	4	4	5	5	Decreasing
84	293	SDC	Very High Risk		5048	27° 57' 3.6"	88° 42' 18"	Brahma-putra		Sikkim	-	3	3	3	3	2	2	3	3	Decreasing
85	295	SDC	Very High Risk		4850	27° 55' 12"	88° 40' 19.2"	Brahma-putra		Sikkim	-	9	11	10	8	9	8	11	9	No Change
86	298	SDC	Very High Risk		4508	27° 52' 22.8"	88° 38' 16.8"	Brahma-putra		Sikkim	-	6	9	#	6	#	6	9	7	No Change
87	312	SDC	Medium Risk		5137	27° 42' 3.6"	88° 30' 50.4"	Brahma-putra		Sikkim	-	7	#	10	9	10	7	10	9	Increasing
88	345	SDC	Medium Risk		5108	27° 51' 50.4"	88° 44' 49.2"	Brahma-putra		Sikkim	-	20	19	19	17	19	17	20	19	Decreasing
89	515	SDC	Medium Risk		5063	27° 51' 14.4"	88° 48' 21.6"	Brahma-putra		Sikkim	-	10	9	10	11	10	9	11	10	No Change
90	569	SDC	Medium Risk		5450	28° 0' 7.2"	88° 38' 24"	Brahma-putra		Sikkim	-	30	#	33	33	33	30	33	32	Increasing
91	599	SDC	Very High Risk		4251	27° 41' 42"	88° 42' 57.6"	Brahma-putra		Sikkim	-	10	9	#	9	#	9	10	9	Decreasing
92	03_82L_007	NRSC			4163	28° 50' 15"	94° 27' 5.04"	Brahma-putra	Ding	Arunachal Pradesh	16	16	17	16	18	18	16	18	17	Increasing
93	03_83A_003	NRSC			5188	27° 46' 12.72"	92° 25' 56.64"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	24	96	97	90	90	86	86	97	92	Decreasing
94	03_83A_004	NRSC			5109	27° 45' 47.16"	92° 25' 29.64"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	17	18	22	20	21	20	18	22	20	Increasing
95	03_83A_005	NRSC			4994	27° 45' 20.52"	92° 24' 2.52"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	13	13	13	13	13	13	13	13	13	No Change
96	03_83A_007	NRSC			5028	27° 43' 39.36"	92° 26' 12.48"	Brahma-putra	Jia Brali	Arunachal Pradesh	14	20	21	15	16	15	15	21	17	Decreasing
97	03_91C_026	NRSC			4305	29° 20' 18.24"	96° 4' 57.72"	Brahma-putra	Dibang	Arunachal Pradesh	28	#	29	29	30	26	26	30	29	Decreasing
98	03_91D_075	NRSC			4274	28° 36' 28.8"	96° 19' 14.16"	Brahma-putra	Dibang	Arunachal Pradesh	23	#	#	28	27	25	25	28	27	Decreasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
99	03_91H_073	NRSC			4481	28° 3' 15.48"	97° 19' 47.64"	Brahma-putra	Lohit	Arunachal Pradesh	25	#	22	30	27	25	22	30	26	Increasing
100	129	SDC	Very High Risk		4895	27°46'24.165"	92°19'1.10"	Brahma-putra		Arunachal Pradesh		10	10	13	11	13	10	13	11	Increasing

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability,
“-”indicates Inventory data Not Available, “#” indicates cloud covered, frozen/ dried lakes

Table No.5.1.a: Results of Glacial Lakes within India showing increasing trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_52A_004	NRSC/ SDC	/Very High Risk		4619	35° 4' 28.2"	76° 17' 33.72"	Indus	Shyok	Ladakh	11	10	10	10	11	11	10	11	10	Increasing
2	01_52B_012	NRSC	129I		5137	34° 0' 19.8"	76° 47' 12.84"	Indus	Indus	Ladakh	17	13	15	15	16	15	13	16	15	Increasing
3	01_52L_006	NRSC	306I		5727	32° 26' 27.24"	78° 55' 29.28"	Indus	Indus	Ladakh	12	9	11	11	11	11	9	11	11	Increasing
4	01_43J_003	NRSC			3954	34° 55' 36.12"	74° 9' 19.44"	Indus	Jhelum	Jammu & Kashmir	20	#	#	15	48	20	15	48	28	Increasing
5	27	SDC	Very High Risk		3775	34° 22' 51.6"	74° 52' 33.6"	Indus		Jammu & Kashmir	-	#	7	#	11	11	7	11	10	Increasing
6	01_62B_003	NRSC	86I		5288	30° 28' 36.48"	80° 35' 35.16"	Indus	Sutlej	Uttarakhand	12	13	14	14	15	14	13	15	14	Increasing
7	02_53N_001	NRSC	250G		4688	30° 54' 7.92"	79° 45' 12.6"	Ganga	Ganga	Uttarakhand	21	21	21	24	23	22	21	24	22	Increasing
8	02_62B_004	NRSC	232G		4918	30° 33' 52.2"	80° 10' 41.16"	Ganga	Sarda	Uttarakhand	19	18	29	28	31	30	18	31	27	Increasing
9	03_77D_006	NRSC/ SDC	/Very High Risk		5084	28° 0' 51.84"	88° 33' 41.76"	Brahma-putra	Teesta	Sikkim	22	19	29	28	26	26	19	29	26	Increasing
10	03_78A_001	NRSC/ SDC	/High Risk	SK_9	5371	27° 59' 30.12"	88° 48' 55.8"	Brahma-putra	Teesta	Sikkim	156	175	184	184	184	186	175	186	183	Increasing
11	03_78A_003	NRSC/ SDC	/Very High Risk	SK_11	4977	27° 58' 31.08"	88° 36' 59.04"	Brahma-putra	Teesta	Sikkim	58	54	34	59	57	58	34	59	52	Increasing
12	03_78A_005	NRSC			5201	27° 58' 31.44"	88° 25' 20.64"	Brahma-putra	Teesta	Sikkim	11	12	13	10	13	14	10	14	12	Increasing
13	03_78A_017	NRSC			5545	27° 53' 34.8"	88° 11' 31.92"	Brahma-putra	Teesta	Sikkim	19	23	28	30	29	30	23	30	28	Increasing
14	03_78A_019	NRSC/ SDC	/Very High Risk		4809	27° 51' 52.2"	88° 51' 46.44"	Brahma-putra	Teesta	Sikkim	15	11	13	13	13	15	11	15	13	Increasing
15	03_78A_020	NRSC			5219	27° 52' 49.44"	88° 15' 4.68"	Brahma-putra	Teesta	Sikkim	14	13	13	13	15	14	13	15	14	Increasing
16	03_78A_021	NRSC		SK_26	5431	27° 49' 28.2"	88° 14' 57.12"	Brahma-putra	Teesta	Sikkim	56	87	94	97	95	96	87	97	94	Increasing
17	03_78A_026	NRSC			4736	27° 33' 44.28"	88° 7' 24.96"	Brahma-putra	Teesta	Sikkim	11	10	12	11	11	11	10	12	11	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
18	03_78A_031	NRSC			4305	27° 26' 15"	88° 5' 9.6"	Brahma-putra	Teesta	Sikkim	14	12	13	12	14	13	12	14	13	Increasing
19	03_78A_035	NRSC			4998	27° 57' 3.24"	88° 21' 15.48"	Brahma-putra	Teesta	Sikkim	-	11	15	13	42	45	11	45	25	Increasing
20	256	SDC	High risk		4615	27° 48' 57.6"	88° 39' 25.2"	Brahma-putra		Sikkim	-	13	14	14	14	16	13	16	14	Increasing
21	312	SDC	Medium Risk		5137	27° 42' 3.6"	88° 30' 50.4"	Brahma-putra		Sikkim	-	7	#	10	9	10	7	10	9	Increasing
22	569	SDC	Medium Risk		5450	28° 0' 7.2"	88° 38' 24"	Brahma-putra		Sikkim	-	30	#	33	33	33	30	33	32	Increasing
23	03_82L_007	NRSC			4163	28° 50' 15"	94° 27' 5.04"	Brahma-putra	Ding	Arunachal Pradesh	16	16	17	16	18	18	16	18	17	Increasing
24	03_83A_004	NRSC			5109	27° 45' 47.16"	92° 25' 29.64"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	17	18	22	20	21	20	18	22	20	Increasing
25	03_91H_073	NRSC			4481	28° 3' 15.48"	97° 19' 47.64"	Brahma-putra	Lohit	Arunachal Pradesh	25	#	22	30	27	25	22	30	26	Increasing
26	129	SDC	Very High Risk		4895	27°46'24.165"	92°19'1.10"	Brahma-putra		Arunachal Pradesh		10	10	13	11	13	10	13	11	Increasing

Table No.5.1.b: Results of Glacial Lakes within India showing no change trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_42H_002	NRSC	162I		2763	36° 38' 34.8"	73° 24' 26.64"	Indus	Gilgit	Ladakh	13	17	16	18	18	17	16	18	17	No Change
2	01_52A_002	NRSC			4537	35° 5' 48.12"	76° 14' 0.6"	Indus	Shyok	Ladakh	23	22	23	23	23	22	22	23	23	No Change
3	01_52B_010	NRSC/ SDC	75I/Medium Risk		5122	34° 3' 6.48"	76° 43' 5.16"	Indus	Indus	Ladakh	18	17	17	17	17	17	17	17	17	No Change
4	01_52C_003	NRSC	7I	JK_187	4512	33° 9' 26.28"	76° 59' 3.48"	Indus	Indus	Ladakh	45	58	57	58	58	57	57	58	58	No Change
5	01_52J_001	NRSC	8I	JK_197	5311	34° 27' 27.72"	78° 8' 6.36"	Indus	Shyok	Ladakh	97	99	102	104	98	96	96	104	100	No Change
6	1360	SDC	Very High Risk		4667	35° 1' 37.2"	75° 43' 30"	Indus		Ladakh		14	15	14	12	14	12	15	14	No Change
7	01_52C_002	NRSC	46I		4092	33° 52' 10.2"	76° 7' 9.48"	Indus	Chenab	Jammu & Kashmir	26	43	43	45	44	42	42	45	43	No Change
8	182	SDC	Very High Risk		4304	34° 14' 2.4"	75° 19' 30"	Indus		Jammu & Kashmir	-	#	8	9	8	8	8	9	8	No Change
9	931	SDC	Very High Risk		4082	33° 55' 44.4"	75° 23' 20.4"	Indus		Jammu & Kashmir	-	#	22	20	22	21	20	22	21	No Change
10	938	SDC	Very High Risk		3683	33° 57' 10.8"	75° 22' 40.8"	Indus		Jammu & Kashmir	-	19	20	14	19	20	14	20	18	No Change
11	951	SDC	Very High Risk		3762	34° 4' 1.2"	75° 28' 30"	Indus		Jammu & Kashmir	-	#	17	18	18	17	17	18	18	No Change
12	958	SDC	Very High Risk		4103	34° 8' 16.8"	75° 24' 57.6"	Indus		Jammu & Kashmir	-	8	10	9	8	9	8	10	9	No Change
13	963	SDC	Medium Risk		3725	34° 8' 20.4"	75° 22' 33.6"	Indus		Jammu & Kashmir	-	31	29	31	31	30	29	31	30	No Change
14	1037	SDC	Medium Risk/27I		3603	34° 25' 19.2"	75° 3' 28.8"	Indus		Jammu & Kashmir	-	#	#	38	38	40	38	40	39	No Change
15	01_52H_002	NRSC/ SDC	4I/Very High Risk	HP_3	4101	32° 31' 28.92"	77° 13' 5.88"	Indus	Chenab	Himachal Pradesh	62	100	104	103	102	101	100	104	102	No Change
16	01_52H_004	NRSC		HP_5	4155	32° 29' 47.04"	77° 33' 5.76"	Indus	Chenab	Himachal Pradesh	46	154	167	166	167	154	154	167	162	No Change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
17	1998	SDC	Very High Risk		3857	32° 19' 12"	76° 54' 28.8"	Indus		Himachal Pradesh	-	#	#	#	1	1	1	1	1	No Change
18	2031	SDC	Very High Risk		4702	31° 20' 20.4"	78° 15' 10.8"	Indus		Himachal Pradesh	-	#	12	11	12	12	11	12	12	No Change
19	02_62B_005	NRSC	580G		4314	30° 26' 44.52"	80° 23' 16.08"	Ganga	Sarda	Uttarakhand	12	11	13	12	12	12	11	13	12	No Change
20	03_77D_002	NRSC		SK_2	5156	28° 1' 33.96"	88° 42' 36"	Brahma-putra	Teesta	Sikkim	105	107	113	108	104	107	104	113	108	No Change
21	03_77D_005	NRSC/ SDC	/Very High Risk	SK_5	5249	28° 0' 32.76"	88° 41' 52.44"	Brahma-putra	Teesta	Sikkim	79	114	85	111	110	104	85	114	105	No Change
22	03_77D_007	NRSC/ SDC	/Very High Risk		5015	28° 0' 26.28"	88° 34' 18.48"	Brahma-putra	Teesta	Sikkim	24	27	27	26	29	25	25	29	27	No Change
23	03_77D_008	NRSC		SK_8	5039	28° 0' 26.28"	88° 29' 41.64"	Brahma-putra	Teesta	Sikkim	46	43	41	46	42	43	41	46	43	No Change
24	03_78A_007	NRSC/ SDC	/Very High Risk		4977	27° 57' 38.88"	88° 38' 57.48"	Brahma-putra	Teesta	Sikkim	17	18	22	19	19	19	18	22	19	No Change
25	03_78A_008	NRSC			4998	27° 57' 3.24"	88° 21' 15.48"	Brahma-putra	Teesta	Sikkim	44	19	18	19	19	18	18	19	19	No Change
26	03_78A_009	NRSC		SK_16	5044	27° 56' 51.72"	88° 19' 52.68"	Brahma-putra	Teesta	Sikkim	54	64	68	62	65	63	62	68	64	No Change
27	03_78A_010	NRSC			5078	27° 57' 0.72"	88° 18' 16.92"	Brahma-putra	Teesta	Sikkim	36	37	41	38	37	36	36	41	38	No Change
28	03_78A_012	NRSC			5130	27° 54' 4.32"	88° 46' 54.84"	Brahma-putra	Teesta	Sikkim	26	29	30	30	27	29	27	30	29	No Change
29	03_78A_014	NRSC/ SDC	/Very High Risk	SK_20	5234	27° 54' 42.84"	88° 11' 54.96"	Brahma-putra	Teesta	Sikkim	94	141	154	135	136	142	135	154	142	No Change
30	03_78A_015	NRSC/ SDC	/Medium Risk		4970	27° 52' 23.88"	88° 47' 22.2"	Brahma-putra	Teesta	Sikkim	12	11	11	11	11	11	11	11	11	No Change
31	03_78A_023	NRSC			4547	27° 40' 17.04"	88° 30' 46.44"	Brahma-putra	Teesta	Sikkim	33	33	23	32	33	34	23	34	31	No Change
32	03_78A_027	NRSC/ SDC	/Very High Risk		4888	27° 32' 0.6"	88° 5' 8.52"	Brahma-putra	Teesta	Sikkim	33	#	38	41	41	38	38	41	40	No Change
33	227	SDC	Very High Risk		5176	27° 59' 34.8"	88° 32' 49.2"	Brahma-putra		Sikkim	-	66	67	65	62	68	62	68	66	No Change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
34	260	SDC	Medium Risk		5253	27° 53' 38.4"	88° 45' 39.6"	Brahma-putra		Sikkim	-	45	46	45	42	45	42	46	45	No Change
35	295	SDC	Very High Risk		4850	27° 55' 12"	88° 40' 19.2"	Brahma-putra		Sikkim	-	9	11	10	8	9	8	11	9	No Change
36	298	SDC	Very High Risk		4508	27° 52' 22.8"	88° 38' 16.8"	Brahma-putra		Sikkim	-	6	9	#	6	#	6	9	7	No Change
37	515	SDC	Medium Risk		5063	27° 51' 14.4"	88° 48' 21.6"	Brahma-putra		Sikkim	-	10	9	10	11	10	9	11	10	No Change
38	03_83A_005	NRSC			4994	27° 45' 20.52"	92° 24' 2.52"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	13	13	13	13	13	13	13	13	13	No Change

Table No.5.1.c: Results of Glacial Lakes within India showing decreasing trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_52A_003	NRSC			4586	35° 5' 33.36"	76° 15' 7.2"	Indus	Shyok	Ladakh	24	17	27	26	16	14	14	27	20	Decreasing
2	01_52C_001	NRSC	11I		4394	33° 56' 44.52"	76° 13' 53.76"	Indus	Shingo (Indus)	Ladakh	36	54	51	51	53	51	51	54	52	Decreasing
3	01_52L_007	NRSC	184I		5498	32° 24' 36.36"	78° 53' 56.4"	Indus	Indus	Ladakh	32	39	35	34	34	31	31	39	35	Decreasing
4	173	SDC	Medium Risk		5150	34° 45' 54"	76° 42' 36"	Indus		Ladakh		#	11	10	9	9	9	11	10	Decreasing
5	180	SDC	Very High Risk		4442	34° 21' 10.8"	76° 4' 37.2"	Indus		Ladakh	-	#	19	18	16	16	16	19	17	Decreasing
6	976	SDC	High Risk/15I		4314	34° 11' 6"	75° 22' 19.2"	Indus		Jammu & Kashmir	-	#	19	19	18	18	18	19	19	Decreasing
7	993	SDC	Very High Risk		4148	34° 13' 37.2"	75° 13' 19.2"	Indus		Jammu & Kashmir	-	#	6	7	5	5	5	7	6	Decreasing
8	1014	SDC	Very High Risk		3989	34° 17' 56.4"	75° 3' 36"	Indus		Jammu & Kashmir	-	#	4	3	2	2	2	4	3	Decreasing
9	1032	SDC	Very High Risk		4007	34° 23' 9.6"	75° 3' 50.4"	Indus		Jammu & Kashmir	-	#	2	#	1	1	1	2	1	Decreasing
10	01_52H_003	NRSC			4165	32° 29' 54.6"	77° 32' 37.32"	Indus	Chenab	Himachal Pradesh	28	170	95	166	167	154	95	170	150	Decreasing
11	01_53I_002	NRSC/ SDC	26I/Very High Risk		4273	31° 39' 38.52"	78° 10' 1.92"	Indus	Sutlej	Himachal Pradesh	23	34	34	36	30	29	29	36	33	Decreasing
12	1774	SDC	Very High Risk		4593	32° 13' 15.6"	76° 47' 16.8"	Indus		Himachal Pradesh	-	#	12	9	8	8	8	12	9	Decreasing
13	1805	SDC	Very High Risk/81I		4775	32° 45' 43.2"	77° 11' 42"	Indus		Himachal Pradesh	-	5	6	5	5	4	4	6	5	Decreasing
14	1847	SDC	Very High Risk		4570	31° 54' 54"	77° 31' 37.2"	Indus		Himachal Pradesh	-	13	14	14	12	12	12	14	13	Decreasing
15	1936	SDC	Very High Risk/321I		4606	32° 15' 21.6"	76° 46' 37.2"	Indus		Himachal Pradesh	-	#	#	4	3	2	2	4	3	Decreasing
16	2108	SDC	Very High Risk/347G		5587	30° 58' 33.6"	79° 27' 32.4"	Ganga		Uttarakhand	-	22	18	22	20	18	18	22	20	Decreasing
17	2207	SDC	Very High Risk		4707	30° 54' 43.2"	78° 57' 28.8"	Ganga		Uttarakhand	-	13	12	11	12	8	8	13	11	Decreasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
18	03_77D_004	NRSC/ SDC	/Very High Risk	SK_4	5287	28° 0' 25.56"	88° 42' 46.08"	Brahma-putra	Teesta	Sikkim	106	130	116	117	120	122	116	130	121	Decreasing
19	03_78A_002	NRSC/ SDC	/Very High Risk		4952	27° 58' 56.28"	88° 30' 28.08"	Brahma-putra	Teesta	Sikkim	22	41	#	37	35	37	35	41	38	Decreasing
20	03_78A_006	NRSC			5004	27° 58' 15.6"	88° 25' 45.84"	Brahma-putra	Teesta	Sikkim	11	15	15	14	14	14	14	15	14	Decreasing
21	03_78A_013	NRSC		SK_19	5470	27° 55' 7.68"	88° 9' 39.6"	Brahma-putra	Teesta	Sikkim	63	88	82	87	79	86	79	88	84	Decreasing
22	03_78A_016	NRSC			5451	27° 53' 33.72"	88° 12' 47.16"	Brahma-putra	Teesta	Sikkim	14	#	20	13	9	#	9	20	14	Decreasing
23	237	SDC	Very Low Risk		5322	27° 59' 34.8"	88° 48' 3.6"	Brahma-putra		Sikkim	-	10	10	10	9	9	9	10	10	Decreasing
24	292	SDC	Medium Risk		5577	28° 0' 21.6"	88° 39' 18"	Brahma-putra		Sikkim	-	5	#	5	4	4	4	5	5	Decreasing
25	293	SDC	Very High Risk		5048	27° 57' 3.6"	88° 42' 18"	Brahma-putra		Sikkim	-	3	3	3	3	2	2	3	3	Decreasing
26	345	SDC	Medium Risk		5108	27° 51' 50.4"	88° 44' 49.2"	Brahma-putra		Sikkim	-	20	19	19	17	19	17	20	19	Decreasing
27	599	SDC	Very High Risk		4251	27° 41' 42"	88° 42' 57.6"	Brahma-putra		Sikkim	-	10	9	#	9	#	9	10	9	Decreasing
28	03_83A_003	NRSC			5188	27° 46' 12.72"	92° 25' 56.64"	Brahma-putra	Dangme Chhu	Arunachal Pradesh	24	96	97	90	90	86	86	97	92	Decreasing
29	03_83A_007	NRSC			5028	27° 43' 39.36"	92° 26' 12.48"	Brahma-putra	Jia Brali	Arunachal Pradesh	14	20	21	15	16	15	15	21	17	Decreasing
30	03_91C_026	NRSC			4305	29° 20' 18.24"	96° 4' 57.72"	Brahma-putra	Dibang	Arunachal Pradesh	28	#	29	29	30	26	26	30	29	Decreasing
31	03_91D_075	NRSC			4274	28° 36' 28.8"	96° 19' 14.16"	Brahma-putra	Dibang	Arunachal Pradesh	23	#	#	28	27	25	25	28	27	Decreasing

Table No.5.1.d: Results of Glacial Lakes within India which couldn't be analyzed during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation (m)	Latitude (N)	Longitude (E)	Basin	River	State/UT	Inventory 2011 (Ha)	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_52E_001	NRSC		JK_188	5116	35° 25' 4.8"	77° 36' 16.56"	Indus	Shyok	Ladakh	51	#	#	#	#	#	#	#	#	No Analysis
2	98	SDC	High Risk		4103	34° 23' 31.2"	75° 5' 6"	Indus		Jammu & Kashmir	-	#	#	#	5	#	5	5	5	No Analysis
3	02_62B_007	NRSC			4839	30° 16' 42.96"	80° 7' 49.8"	Ganga	Sarda	Uttarakhand	19	#	#	#	#	#	#	#	#	No Analysis
4	2147	SDC	Medium Risk		5688	30° 58' 48"	79° 29' 13.2"	Ganga		Uttarakhand	-	#	#	#	#	#	#	#	#	No Analysis
5	2299	SDC	Very High Risk		4490	30° 11' 2.4"	79° 52' 48"	Ganga		Uttarakhand	-	#	#	#	#	#	#	#	#	No Analysis

Table No.5.2: Results of Analysis of Water Bodies within India for the year 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_42H_001	NRSC		JK_1	4292	36° 52' 50.16"	73° 42' 4.68"	Indus	Gilgit	Ladakh (POK)	276	276	267	266	268	273	272	266	273	269	No change
2	01_42H_003	NRSC		JK_3	3854	36° 38' 47.4"	73° 38' 50.28"	Indus	Gilgit	Ladakh (POK)	97	124	106	109	107	105	110	105	110	107	No change
3	01_43A_001	NRSC		JK_22	3641	35° 59' 42"	72° 36' 45.36"	Indus	Gilgit	Ladakh (POK)	203	203	204	205	206	202	200	200	206	203	No change
4	01_43A_002	NRSC		JK_23	3790	35° 56' 42.36"	72° 35' 40.92"	Indus	Gilgit	Ladakh (POK)	91	91	87	101	101	97	91	87	101	95	No change
5	01_43E_006	NRSC		JK_30	4186	35° 56' 43.08"	73° 21' 52.56"	Indus	Gilgit	Ladakh (POK)	71	71	68	68	65	70	72	65	72	69	No change
6	01_43E_023	NRSC		JK_47	4155	35° 51' 54"	73° 44' 42.72"	Indus	Gilgit	Ladakh (POK)	82	86	85	83	90	87	87	83	90	86	No change
7	01_43M_003	NRSC		JK_120	2663	35° 13' 54.84"	75° 37' 49.44"	Indus	Shigar (Indus)	Ladakh (POK)	208	187	233	255	251	254	244	233	255	247	Increasing
8	01_43N_001	NRSC		JK_128	4142	34° 59' 28.32"	75° 14' 9.96"	Indus	Shingo (Indus)	Ladakh (POK)	127	127	126	127	135	132	132	126	135	130	Increasing
9	01_52G_001	NRSC		JK_189	5008	33° 59' 57.12"	77° 58' 44.04"	Indus	Shyok	Ladakh	45	45	127	46	40	45	45	40	127	61	Decrease
10	01_52G_003	NRSC		JK_191	4533	33° 18' 38.52"	77° 59' 49.2"	Indus	Indus	Ladakh	1502	1473	902	560	1152	971	847	560	1152	886	Increasing
11	01_52I_003	NRSC		JK_195	5159	35° 24' 37.8"	78° 17' 3.84"	Indus	Shyok	Ladakh	180	180	174	168	151	126	120	120	174	148	Decrease
12	01_52I_004	NRSC		JK_196	5141	35° 23' 27.96"	78° 13' 7.68"	Indus	Shyok	Ladakh	124	124	81	64	78	70	68	64	81	72	Decrease
13	01_52J_002	NRSC		JK_198	5359	34° 13' 59.16"	78° 25' 34.32"	Indus	Shyok	Ladakh	67	67	62	67	69	67	69	62	69	67	Increasing
14	01_52J_005	NRSC		JK_201	5430	34° 11' 9.96"	78° 30' 28.08"	Indus	Shyok	Ladakh	44	44	51	49	48	47	46	46	51	48	Decrease
15	01_52J_006	NRSC		JK_202	5401	34° 10' 23.88"	78° 26' 16.08"	Indus	Shyok	Ladakh	110	110	105	104	106	108	108	104	108	106	No change
16	01_52J_009	NRSC		JK_205	5576	34° 9' 21.6"	78° 33' 11.52"	Indus	Shyok	Ladakh	57	57	67	68	69	60	64	60	69	66	Decrease
17	01_52K_004	NRSC		JK_212	4293	33° 31' 49.08"	78° 54' 37.8"	Indus	Shyok	Ladakh	5741	5741	5916	5848	5993	5845	5997	5845	5997	5920	No change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
19	01_52K_010	NRSC		JK_218	5313	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	152	152	146	148	153	155	157	146	157	152	Increasing
20	01_52K_011	NRSC		JK_219	5314	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	153	153	180	176	180	181	185	176	185	180	No change
21	01_52K_012	NRSC		JK_220	5315	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	154	154	162	177	166	167	165	162	177	167	No change
22	01_52K_014	NRSC		JK_222	4535	33° 15' 6.84"	78° 2' 34.44"	Indus	Indus	Ladakh	405	405	382	431	465	465	455	382	465	440	Increasing
23	01_52K_016	NRSC		JK_224	4675	33° 6' 22.32"	78° 18' 12.96"	Indus	Sutlej	Ladakh	507	507	524	515	525	513	511	511	525	518	No change
24	01_52L_001	NRSC		JK_225	4523	32° 53' 48.12"	78° 18' 48.6"	Indus	Sutlej	Ladakh	14110	14139	13758	13751	13833	13970	13990	13751	13990	13860	No change
25	01_52L_002	NRSC		JK_226	4986	32° 58' 54.84"	78° 35' 43.44"	Indus	Indus	Ladakh	442	442	426	432	442	436	429	426	442	433	No change
26	01_52L_003	NRSC		JK_227	4985	32° 55' 14.88"	78° 36' 0.72"	Indus	Indus	Ladakh	648	649	463	474	524	522	520	463	524	501	Increasing
27	01_42H_005	NRSC		JK_5	2237	36° 14' 56.76"	73° 21' 41.4"	Indus	Gilgit	Jammu & Kashmir	52	73	71	75	68	64	63	63	75	68	Decrease
28	01_43G_001	NRSC		JK_67	346	33° 12' 47.16"	73° 42' 41.76"	Indus	Jhelum	Jammu & Kashmir (POK)	22154	14989	19449	22413	29753	29746	29760	19449	29760	26224	Increasing
29	01_43J_004	NRSC	5I	JK_82	4078	34° 55' 15.24"	74° 31' 14.88"	Indus	Jhelum	Jammu & Kashmir (POK)	65	59	#	62	75	80	74	62	80	73	Increasing
30	01_43J_007	NRSC	6I	JK_85	3708	34° 49' 45.12"	74° 3' 42.12"	Indus	Jhelum	Jammu & Kashmir (POK)	95	95	#	103	93	98	96	93	103	98	Decrease
31	01_43J_017	NRSC	3I	JK_95	3580	34° 25' 55.56"	74° 55' 27.12"	Indus	Jhelum	Jammu & Kashmir	164	164	156	155	158	167	159	155	167	159	No change
32	01_43J_020	NRSC		JK_98	1584	34° 14' 59.64"	74° 40' 10.2"	Indus	Jhelum	Jammu & Kashmir	191	191	187	178	162	184	193	162	193	181	No change
33	01_43J_021	NRSC		JK_99	1582	34° 7' 6.24"	74° 51' 39.6"	Indus	Jhelum	Jammu & Kashmir	1238	1238	987	950	1045	1052	1176	950	1176	1042	Increasing
34	01_43J_022	NRSC		JK_100	1583	34° 7' 11.28"	74° 49' 50.52"	Indus	Jhelum	Jammu & Kashmir	60	60	75	72	72	71	73	71	75	73	No change
35	01_43K_010	NRSC		JK_111	3946	33° 31' 8.4"	74° 35' 1.32"	Indus	Jhelum	Jammu & Kashmir	66	66	72	72	73	73	73	72	73	73	No change
36	01_43K_014	NRSC		JK_115	3521	33° 30' 47.16"	74° 46' 6.96"	Indus	Jhelum	Jammu & Kashmir	112	111	140	139	141	133	137	133	141	138	No change
37	01_43N_020	NRSC		JK_147	4112	34° 41' 50.28"	75° 8' 12.84"	Indus	Jhelum	Jammu & Kashmir (POK)	63	61	57	62	64	63	67	57	67	63	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
38	01_43N_022	NRSC		JK_149	4243	34° 39' 59.4"	75° 10' 45.48"	Indus	Jhelum	Jammu & Kashmir (POK)	72	73	73	76	76	75	70	70	76	74	No change
39	01_43N_027	NRSC		JK_154	3683	34° 23' 17.16"	75° 7' 6.6"	Indus	Jhelum	Jammu & Kashmir	48	48	46	45	45	47	46	45	47	46	No change
40	01_43N_030	NRSC		JK_157	3799	34° 8' 21.12"	75° 8' 50.64"	Indus	Jhelum	Jammu & Kashmir	86	86	87	86	88	88	87	86	88	87	No change
41	01_43N_032	NRSC		JK_159	3595	34° 5' 37.32"	75° 29' 52.44"	Indus	Jhelum	Jammu & Kashmir	49	49	56	56	57	55	54	54	57	56	No change
42	01_43P_002	NRSC		JK_167	669	32° 41' 48.84"	75° 8' 44.16"	Indus	Ravi	Jammu & Kashmir	52	52	55	57	54	54	55	54	57	55	No change
43	01_52D_001	NRSC		HP_1	780	32° 36' 52.92"	76° 1' 53.76"	Indus	Ravi	Himachal Pradesh	688	725	792	#	872	875	819	792	875	840	Increasing
44	01_52H_005	NRSC		HP_6	4286	32° 28' 53.76"	77° 36' 52.56"	Indus	Chenab	Himachal Pradesh	45	45	44	49	50	49	49	44	50	48	Increasing
45	01_53A_001	NRSC		HP_9	409	31° 59' 21.84"	76° 3' 14.4"	Indus	Beas	Himachal Pradesh	21867	16946	13070	12867	20095	19865	20776	12867	20776	17335	Increasing
46	01_53A_002	NRSC		HP_10	495	31° 23' 7.8"	76° 32' 6"	Indus	Sutlej	Himachal Pradesh	13679	10256	8571	9872	11547	12700	12587	8571	12700	11055	Increasing
47	01_53E_001	NRSC		HP_12	921	31° 40' 22.8"	77° 4' 44.76"	Indus	Beas	Himachal Pradesh	72	72	91	94	120	71	70	70	120	89	Decreasing
48	02_53K_001	NRSC		UK_1	355	29° 34' 10.2"	78° 45' 46.8"	Ganga	Ramganga	Uttarakhand	6790	3880	4030	4623	5465	6563	6853	4030	6853	5507	Increasing
49	02_53K_002	NRSC		UK_2	260	29° 19' 9.84"	78° 55' 13.08"	Ganga	Ramganga	Uttarakhand	1597	1597	359	791	1055	1196	1252	359	1252	931	Increasing
50	02_53O_001	NRSC		UK_4	1968	29° 23' 9.24"	79° 27' 35.64"	Ganga	Ramganga	Uttarakhand	46	46	44	45	46	45	42	42	46	44	No change
51	02_53O_005	NRSC		UK_8	239	29° 8' 6.72"	79° 17' 19.68"	Ganga	Ramganga	Uttarakhand	1510	1510	1070	1219	1251	1376	1226	1070	1376	1228	Increasing
52	02_53P_001	NRSC		UK_9	210	28° 57' 29.88"	79° 50' 32.64"	Ganga	Ganga	Uttarakhand	2054	2054	630	1704	2114	1892	1838	630	2114	1636	Increasing
53	02_53P_003	NRSC		UK_11	207	28° 54' 3.6"	79° 37' 22.8"	Ganga	Ramganga	Uttarakhand	1078	1078	428	1164	1276	1262	1265	428	1276	1079	Increasing
54	03_77D_003	NRSC		SK_3	5098	28° 0' 47.52"	88° 45' 20.88"	Brahmaputra	Teesta	Sikkim	96	84	104	107	115	114	114	104	115	111	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
55	03_82O_042	NRSC		AP_49	3093	29° 10' 36.48"	95° 36' 56.16"	Brahmaputra	Dibang	Arunachal Pradesh	44	44	46	#	42	#	42	42	46	43	Decreasing
56	03_82O_061	NRSC		AP_54	3811	29° 0' 40.32"	95° 53' 5.64"	Brahmaputra	Dibang	Arunachal Pradesh	54	54	60	57	62	58	58	57	62	59	No change
57	03_82O_062	NRSC		AP_55	3612	29° 0' 18.36"	95° 54' 19.44"	Brahmaputra	Dibang	Arunachal Pradesh	52	52	53	59	57	58	59	53	59	57	Increasing
58	03_82O_064	NRSC		AP_57	3689	29° 3' 41.76"	95° 15' 45"	Brahmaputra	Dihang	Arunachal Pradesh	44	44	48	51	50	48	50	48	51	49	No change
59	03_82P_010	NRSC		AP_67	1676	28° 8' 53.16"	95° 56' 35.88"	Brahmaputra	Dibang	Arunachal Pradesh	99	99	91	98	102	105	103	91	105	100	Increasing
60	03_83A_012	NRSC		AP_77	4287	27° 31' 6.6"	92° 2' 24"	Brahmaputra	Dangme Chhu	Arunachal Pradesh	63	63	59	56	58	58	59	56	59	58	No change
61	03_91C_034	NRSC		AP_84	4288	29° 18' 6.48"	96° 4' 55.92"	Brahmaputra	Dibang	Arunachal Pradesh	134	134	144	142	147	144	150	142	150	145	No change
62	03_91C_038	NRSC		AP_85	4002	29° 16' 8.4"	96° 9' 24.12"	Brahmaputra	Dibang	Arunachal Pradesh	113	113	102	102	100	100	103	100	103	101	No change
63	03_91C_040	NRSC		AP_87	4450	29° 15' 19.08"	96° 14' 40.92"	Brahmaputra	Lohit	Arunachal Pradesh	94	94	#	96	95	90	92	90	96	93	Decreasing
64	03_91C_042	NRSC		AP_89	4531	29° 14' 38.04"	96° 14' 39.12"	Brahmaputra	Dibang	Arunachal Pradesh	50	50	#	55	55	51	#	51	55	54	Decreasing
65	03_91C_044	NRSC		AP_90	4230	29° 13' 23.16"	96° 16' 41.16"	Brahmaputra	Lohit	Arunachal Pradesh	63	63	67	#	60	68	67	60	68	66	No change
66	03_91C_045	NRSC		AP_91	3493	29° 13' 44.4"	96° 11' 29.4"	Brahmaputra	Dibang	Arunachal Pradesh	113	113	100	108	107	111	110	100	111	107	Increasing
67	03_91C_046	NRSC		AP_92	3353	29° 13' 32.52"	96° 9' 36"	Brahmaputra	Dibang	Arunachal Pradesh	61	61	55	60	56	60	56	55	60	57	No change
68	03_91C_049	NRSC		AP_95	4261	29° 11' 46.32"	96° 12' 10.08"	Brahmaputra	Dibang	Arunachal Pradesh	57	80	#	71	70	62	62	62	71	66	Decreasing
69	03_91C_064	NRSC		AP_100	3972	29° 4' 45.84"	96° 8' 40.92"	Brahmaputra	Dibang	Arunachal Pradesh	89	89	#	86	86	87	85	85	87	86	No change
70	03_91C_069	NRSC		AP_101	3245	29° 3' 36"	96° 8' 40.2"	Brahmaputra	Dibang	Arunachal Pradesh	78	78	#	88	85	85	#	85	88	86	No change
71	03_91D_009	NRSC		AP_108	4037	28° 55' 40.44"	96° 20' 19.68"	Brahmaputra	Dibang	Arunachal Pradesh	47	47	43	48	51	49	46	43	51	47	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
72	03_91D_010	NRSC		AP_109	3323	28° 55' 8.4"	96° 22' 58.8"	Brahmaputra	Dibang	Arunachal Pradesh	46	46	52	#	52	52	55	52	55	53	No change
73	03_91D_022	NRSC		AP_118	3143	28° 52' 33.96"	96° 23' 38.76"	Brahmaputra	Dibang	Arunachal Pradesh	44	44	41	37	43	26	35	26	43	36	Decreasing
74	03_91D_041	NRSC		AP_135	3526	28° 46' 32.52"	96° 31' 53.4"	Brahmaputra	Dibang	Arunachal Pradesh	115	115	111	115	122	112	125	111	125	117	Increasing
75	03_91D_107	NRSC		AP_163	3769	28° 12' 8.64"	96° 53' 51.72"	Brahmaputra	Lohit	Arunachal Pradesh	67	67	64	64	64	65	66	64	66	65	No change
76	03_91H_067	NRSC		AP_185	3791	28° 5' 44.52"	97° 17' 20.4"	Brahmaputra	Lohit	Arunachal Pradesh	56	56	55	49	#	45	51	45	55	50	Decreasing
77	03_92A_005	NRSC		AP_203	3391	27° 41' 23.64"	96° 51' 38.16"	Brahmaputra	Lohit	Arunachal Pradesh	50	50	44	51	54	48	53	44	54	50	Increasing
78	03_92A_006	NRSC		AP_204	1178	27° 41' 50.28"	96° 27' 7.2"	Brahmaputra	Lohit	Arunachal Pradesh	83	83	79	78	79	85	76	76	85	79	No change
79	03_92E_001	NRSC		AP_206	4206	27° 59' 23.28"	97° 22' 8.76"	Brahmaputra	Lohit	Arunachal Pradesh	45	45	50	50	#	54	54	50	54	52	Increasing

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability, “-” indicates Inventory data Not Available, “#” indicates cloud covered, frozen/ dried lakes

Table No.5.2.a: Results of Water Bodies within India showing increasing trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_43M_003	NRSC		JK_120	2663	35° 13' 54.84"	75° 37' 49.44"	Indus	Shigar (Indus)	Ladakh (POK)	208	187	233	255	251	254	244	233	255	247	Increasing
2	01_43N_001	NRSC		JK_128	4142	34° 59' 28.32"	75° 14' 9.96"	Indus	Shingo (Indus)	Ladakh (POK)	127	127	126	127	135	132	132	126	135	130	Increasing
3	01_52G_003	NRSC		JK_191	4533	33° 18' 38.52"	77° 59' 49.2"	Indus	Indus	Ladakh	1502	1473	902	560	1152	971	847	560	1152	886	Increasing
4	01_52J_002	NRSC		JK_198	5359	34° 13' 59.16"	78° 25' 34.32"	Indus	Shyok	Ladakh	67	67	62	67	69	67	69	62	69	67	Increasing
5	01_52K_010	NRSC		JK_218	5313	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	152	152	146	148	153	155	157	146	157	152	Increasing
6	01_52K_014	NRSC		JK_222	4535	33° 15' 6.84"	78° 2' 34.44"	Indus	Indus	Ladakh	405	405	382	431	465	465	455	382	465	440	Increasing
7	01_52L_003	NRSC		JK_227	4985	32° 55' 14.88"	78° 36' 0.72"	Indus	Indus	Ladakh	648	649	463	474	524	522	520	463	524	501	Increasing
8	01_43G_001	NRSC		JK_67	346	33° 12' 47.16"	73° 42' 41.76"	Indus	Jhelum	Jammu & Kashmir (POK)	22154	14989	19449	22413	29753	29746	29760	19449	29760	26224	Increasing
9	01_43J_004	NRSC	5I	JK_82	4078	34° 55' 15.24"	74° 31' 14.88"	Indus	Jhelum	Jammu & Kashmir (POK)	65	59	#	62	75	80	74	62	80	73	Increasing
10	01_43J_021	NRSC		JK_99	1582	34° 7' 6.24"	74° 51' 39.6"	Indus	Jhelum	Jammu & Kashmir	1238	1238	987	950	1045	1052	1176	950	1176	1042	Increasing
11	01_43N_020	NRSC		JK_147	4112	34° 41' 50.28"	75° 8' 12.84"	Indus	Jhelum	Jammu & Kashmir (POK)	63	61	57	62	64	63	67	57	67	63	Increasing
12	01_52D_001	NRSC		HP_1	780	32° 36' 52.92"	76° 1' 53.76"	Indus	Ravi	Himachal Pradesh	688	725	792	#	872	875	819	792	875	840	Increasing
13	01_52H_005	NRSC		HP_6	4286	32° 28' 53.76"	77° 36' 52.56"	Indus	Chenab	Himachal Pradesh	45	45	44	49	50	49	49	44	50	48	Increasing
14	01_53A_001	NRSC		HP_9	409	31° 59' 21.84"	76° 3' 14.4"	Indus	Beas	Himachal Pradesh	21867	16946	13070	12867	20095	19865	20776	12867	20776	17335	Increasing
15	01_53A_002	NRSC		HP_10	495	31° 23' 7.8"	76° 32' 6"	Indus	Sutlej	Himachal Pradesh	13679	10256	8571	9872	11547	12700	12587	8571	12700	11055	Increasing

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024(Ha)	Maximum Area 2024(Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
16	02_53K_001	NRSC		UK_1	355	29° 34' 10.2"	78° 45' 46.8"	Ganga	Ramganga	Uttarakhand	6790	3880	4030	4623	5465	6563	6853	4030	6853	5507	Increasing
17	02_53K_002	NRSC		UK_2	260	29° 19' 9.84"	78° 55' 13.08"	Ganga	Ramganga	Uttarakhand	1597	1597	359	791	1055	1196	1252	359	1252	931	Increasing
18	02_53O_005	NRSC		UK_8	239	29° 8' 6.72"	79° 17' 19.68"	Ganga	Ramganga	Uttarakhand	1510	1510	1070	1219	1251	1376	1226	1070	1376	1228	Increasing
19	02_53P_001	NRSC		UK_9	210	28° 57' 29.88"	79° 50' 32.64"	Ganga	Ganga	Uttarakhand	2054	2054	630	1704	2114	1892	1838	630	2114	1636	Increasing
20	02_53P_003	NRSC		UK_11	207	28° 54' 3.6"	79° 37' 22.8"	Ganga	Ramganga	Uttarakhand	1078	1078	428	1164	1276	1262	1265	428	1276	1079	Increasing
21	03_77D_003	NRSC		SK_3	5098	28° 0' 47.52"	88° 45' 20.88"	Brahma putra	Teesta	Sikkim	96	84	104	107	115	114	114	104	115	111	Increasing
22	03_82O_062	NRSC		AP_55	3612	29° 0' 18.36"	95° 54' 19.44"	Brahma putra	Dibang	Arunachal Pradesh	52	52	53	59	57	58	59	53	59	57	Increasing
23	03_82P_010	NRSC		AP_67	1676	28° 8' 53.16"	95° 56' 35.88"	Brahma putra	Dibang	Arunachal Pradesh	99	99	91	98	102	105	103	91	105	100	Increasing
24	03_91C_045	NRSC		AP_91	3493	29° 13' 44.4"	96° 11' 29.4"	Brahma putra	Dibang	Arunachal Pradesh	113	113	100	108	107	111	110	100	111	107	Increasing
25	03_91D_009	NRSC		AP_108	4037	28° 55' 40.44"	96° 20' 19.68"	Brahma putra	Dibang	Arunachal Pradesh	47	47	43	48	51	49	46	43	51	47	Increasing
26	03_91D_041	NRSC		AP_135	3526	28° 46' 32.52"	96° 31' 53.4"	Brahma putra	Dibang	Arunachal Pradesh	115	115	111	115	122	112	125	111	125	117	Increasing
27	03_92A_005	NRSC		AP_203	3391	27° 41' 23.64"	96° 51' 38.16"	Brahma putra	Lohit	Arunachal Pradesh	50	50	44	51	54	48	53	44	54	50	Increasing
28	03_92E_001	NRSC		AP_206	4206	27° 59' 23.28"	97° 22' 8.76"	Brahma putra	Lohit	Arunachal Pradesh	45	45	50	50	#	54	54	50	54	52	Increasing

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability,
“-”indicates Inventory data Not Available, “#” indicates cloud covered, frozen/ dried lakes

Table No.5.2.b: Results of Water Bodies within India showing no change trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_42H_001	NRSC		JK_1	4292	36° 52' 50.16"	73° 42' 4.68"	Indus	Gilgit	Ladakh (POK)	276	276	267	266	268	273	272	266	273	269	No change
2	01_42H_003	NRSC		JK_3	3854	36° 38' 47.4"	73° 38' 50.28"	Indus	Gilgit	Ladakh (POK)	97	124	106	109	107	105	110	105	110	107	No change
3	01_43A_001	NRSC		JK_22	3641	35° 59' 42"	72° 36' 45.36"	Indus	Gilgit	Ladakh (POK)	203	203	204	205	206	202	200	200	206	203	No change
4	01_43A_002	NRSC		JK_23	3790	35° 56' 42.36"	72° 35' 40.92"	Indus	Gilgit	Ladakh (POK)	91	91	87	101	101	97	91	87	101	95	No change
5	01_43E_006	NRSC		JK_30	4186	35° 56' 43.08"	73° 21' 52.56"	Indus	Gilgit	Ladakh (POK)	71	71	68	68	65	70	72	65	72	69	No change
6	01_43E_023	NRSC		JK_47	4155	35° 51' 54"	73° 44' 42.72"	Indus	Gilgit	Ladakh (POK)	82	86	85	83	90	87	87	83	90	86	No change
7	01_52J_006	NRSC		JK_202	5401	34° 10' 23.88"	78° 26' 16.08"	Indus	Shyok	Ladakh	110	110	105	104	106	108	108	104	108	106	No change
8	01_52K_004	NRSC		JK_212	4293	33° 31' 49.08"	78° 54' 37.8"	Indus	Shyok	Ladakh	5741	5741	5916	5848	5993	5845	5997	5845	5997	5920	No change
9	01_52K_009	NRSC		JK_217	4921	33° 27' 51.48"	78° 36' 39.24"	Indus	Shyok	Ladakh	204	204	202	202	212	203	202	202	212	204	No change
10	01_52K_011	NRSC		JK_219	5314	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	153	153	180	176	180	181	185	176	185	180	No change
11	01_52K_012	NRSC		JK_220	5315	33° 27' 17.64"	78° 29' 54.24"	Indus	Shyok	Ladakh	154	154	162	177	166	167	165	162	177	167	No change
12	01_52K_016	NRSC		JK_224	4675	33° 6' 22.32"	78° 18' 12.96"	Indus	Sutlej	Ladakh	507	507	524	515	525	513	511	511	525	518	No change
13	01_52L_001	NRSC		JK_225	4523	32° 53' 48.12"	78° 18' 48.6"	Indus	Sutlej	Ladakh	14110	14139	13758	13751	13833	13970	13990	13751	13990	13860	No change
14	01_52L_002	NRSC		JK_226	4986	32° 58' 54.84"	78° 35' 43.44"	Indus	Indus	Ladakh	442	442	426	432	442	436	429	426	442	433	No change
15	01_43J_017	NRSC	3I	JK_95	3580	34° 25' 55.56"	74° 55' 27.12"	Indus	Jhelum	Jammu & Kashmir	164	164	156	155	158	167	159	155	167	159	No change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
16	01_43J_020	NRSC		JK_98	1584	34° 14' 59.64"	74° 40' 10.2"	Indus	Jhelum	Jammu & Kashmir	191	191	187	178	162	184	193	162	193	181	No change
17	01_43J_022	NRSC		JK_100	1583	34° 7' 11.28"	74° 49' 50.52"	Indus	Jhelum	Jammu & Kashmir	60	60	75	72	72	71	73	71	75	73	No change
18	01_43K_010	NRSC		JK_111	3946	33° 31' 8.4"	74° 35' 1.32"	Indus	Jhelum	Jammu & Kashmir	66	66	72	72	73	73	73	72	73	73	No change
19	01_43K_014	NRSC		JK_115	3521	33° 30' 47.16"	74° 46' 6.96"	Indus	Jhelum	Jammu & Kashmir	112	111	140	139	141	133	137	133	141	138	No change
20	01_43N_022	NRSC		JK_149	4243	34° 39' 59.4"	75° 10' 45.48"	Indus	Jhelum	Jammu & Kashmir (POK)	72	73	73	76	76	75	70	70	76	74	No change
21	01_43N_027	NRSC		JK_154	3683	34° 23' 17.16"	75° 7' 6.6"	Indus	Jhelum	Jammu & Kashmir	48	48	46	45	45	47	46	45	47	46	No change
22	01_43N_030	NRSC		JK_157	3799	34° 8' 21.12"	75° 8' 50.64"	Indus	Jhelum	Jammu & Kashmir	86	86	87	86	88	88	87	86	88	87	No change
23	01_43N_032	NRSC		JK_159	3595	34° 5' 37.32"	75° 29' 52.44"	Indus	Jhelum	Jammu & Kashmir	49	49	56	56	57	55	54	54	57	56	No change
24	01_43P_002	NRSC		JK_167	669	32° 41' 48.84"	75° 8' 44.16"	Indus	Ravi	Jammu & Kashmir	52	52	55	57	54	54	55	54	57	55	No change
25	02_53O_001	NRSC		UK_4	1968	29° 23' 9.24"	79° 27' 35.64"	Ganga	Ram-ganga	Uttarakhand	46	46	44	45	46	45	42	42	46	44	No change
26	03_82O_061	NRSC		AP_54	3811	29° 0' 40.32"	95° 53' 5.64"	Brahma putra	Dibang	Arunachal Pradesh	54	54	60	57	62	58	58	57	62	59	No change
27	03_82O_064	NRSC		AP_57	3689	29° 3' 41.76"	95° 15' 45"	Brahma putra	Dihang	Arunachal Pradesh	44	44	48	51	50	48	50	48	51	49	No change
28	03_83A_012	NRSC		AP_77	4287	27° 31' 6.6"	92° 2' 24"	Brahma putra	Dangme Chhu	Arunachal Pradesh	63	63	59	56	58	58	59	56	59	58	No change
29	03_91C_034	NRSC		AP_84	4288	29° 18' 6.48"	96° 4' 55.92"	Brahma putra	Dibang	Arunachal Pradesh	134	134	144	142	147	144	150	142	150	145	No change
30	03_91C_038	NRSC		AP_85	4002	29° 16' 8.4"	96° 9' 24.12"	Brahma putra	Dibang	Arunachal Pradesh	113	113	102	102	100	100	103	100	103	101	No change
31	03_91C_044	NRSC		AP_90	4230	29° 13' 23.16"	96° 16' 41.16"	Brahma putra	Lohit	Arunachal Pradesh	63	63	67	#	60	68	67	60	68	66	No change

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
32	03_91C_046	NRSC		AP_92	3353	29° 13' 32.52"	96° 9' 36"	Brahma putra	Dibang	Arunachal Pradesh	61	61	55	60	56	60	56	55	60	57	No change
33	03_91C_064	NRSC		AP_100	3972	29° 4' 45.84"	96° 8' 40.92"	Brahma putra	Dibang	Arunachal Pradesh	89	89	#	86	86	87	85	85	87	86	No change
34	03_91C_069	NRSC		AP_101	3245	29° 3' 36"	96° 8' 40.2"	Brahma putra	Dibang	Arunachal Pradesh	78	78	#	88	85	85	#	85	88	86	No change
35	03_91D_010	NRSC		AP_109	3323	28° 55' 8.4"	96° 22' 58.8"	Brahma putra	Dibang	Arunachal Pradesh	46	46	52	#	52	52	55	52	55	53	No change
36	03_91D_107	NRSC		AP_163	3769	28° 12' 8.64"	96° 53' 51.72"	Brahma putra	Lohit	Arunachal Pradesh	67	67	64	64	64	65	66	64	66	65	No change
37	03_92A_006	NRSC		AP_204	1178	27° 41' 50.28"	96° 27' 7.2"	Brahma putra	Lohit	Arunachal Pradesh	83	83	79	78	79	85	76	76	85	79	No change

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability,
“-” indicates Inventory data Not Available, “#” indicates cloud covered, frozen/ dried lakes

Table No.5.2.c: Results of Water Bodies within India showing decrease trend in area during 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Latitude (N)	Longitude (E)	Basin	River	State	Inventory 2009	Inventory 2011	Lake Area June 2024 (Ha)	Lake Area July 2024 (Ha)	Lake Area August 2024 (Ha)	Lake Area September 2024 (Ha)	Lake Area October 2024 (Ha)	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)	Trend of the lake for the year 2024
1	01_52G_001	NRSC		JK_189	5008	33° 59' 57.12"	77° 58' 44.04"	Indus	Shyok	Ladakh	45	45	127	46	40	45	45	40	127	61	Decrease
2	01_52I_003	NRSC		JK_195	5159	35° 24' 37.8"	78° 17' 3.84"	Indus	Shyok	Ladakh	180	180	174	168	151	126	120	120	174	148	Decrease
3	01_52I_004	NRSC		JK_196	5141	35° 23' 27.96"	78° 13' 7.68"	Indus	Shyok	Ladakh	124	124	81	64	78	70	68	64	81	72	Decrease
4	01_52J_005	NRSC		JK_201	5430	34° 11' 9.96"	78° 30' 28.08"	Indus	Shyok	Ladakh	44	44	51	49	48	47	46	46	51	48	Decrease
5	01_52J_009	NRSC		JK_205	5576	34° 9' 21.6"	78° 33' 11.52"	Indus	Shyok	Ladakh	57	57	67	68	69	60	64	60	69	66	Decrease
6	01_42H_005	NRSC		JK_5	2237	36° 14' 56.76"	73° 21' 41.4"	Indus	Gilgit	Jammu & Kashmir	52	73	71	75	68	64	63	63	75	68	Decrease
7	01_43J_007	NRSC	6I	JK_85	3708	34° 49' 45.12"	74° 3' 42.12"	Indus	Jhelum	Jammu & Kashmir (POK)	95	95	#	103	93	98	96	93	103	98	Decrease
8	01_53E_001	NRSC		HP_12	921	31° 40' 22.8"	77° 4' 44.76"	Indus	Beas	Himachal Pradesh	72	72	91	94	120	71	70	70	120	89	Decreasing
9	03_82O_042	NRSC		AP_49	3093	29° 10' 36.48"	95° 36' 56.16"	Brahma putra	Dibang	Arunachal Pradesh	44	44	46	#	42	#	42	42	46	43	Decreasing
10	03_91C_040	NRSC		AP_87	4450	29° 15' 19.08"	96° 14' 40.92"	Brahma putra	Lohit	Arunachal Pradesh	94	94	#	96	95	90	92	90	96	93	Decreasing
11	03_91C_042	NRSC		AP_89	4531	29° 14' 38.04"	96° 14' 39.12"	Brahma putra	Dibang	Arunachal Pradesh	50	50	#	55	55	51	#	51	55	54	Decreasing
12	03_91C_049	NRSC		AP_95	4261	29° 11' 46.32"	96° 12' 10.08"	Brahma putra	Dibang	Arunachal Pradesh	57	80	#	71	70	62	62	62	71	66	Decreasing
13	03_91D_022	NRSC		AP_118	3143	28° 52' 33.96"	96° 23' 38.76"	Brahma putra	Dibang	Arunachal Pradesh	44	44	41	37	43	26	35	26	43	36	Decreasing
14	03_91H_067	NRSC		AP_185	3791	28° 5' 44.52"	97° 17' 20.4"	Brahma putra	Lohit	Arunachal Pradesh	56	56	55	49	#	45	51	45	55	50	Decreasing

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability, “-” indicates Inventory data Not Available, “#” indicates cloud covered, frozen/ dried lakes.

Table No.6.1: Results Analysis of Transboundary Glacial Lakes & Water Bodies for the year 2024

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
1	03_77H_011	NRSC		BH_4	4963	GL	28° 13' 48.72"	89° 53' 15"	Brahmap-utra		Bhutan	140	151	164	153	152	152	151	164	154
2	03_77H_017	NRSC			4537	GL	28° 10' 19.2"	89° 50' 54.24"	Brahmap-utra	Puna Tsang Chhu	Bhutan	25	23	24	24	25	25	23	25	24
3	03_77H_021	NRSC			5135	GL	28° 8' 37.68"	89° 50' 25.8"	Brahmap-utra	Puna Tsang Chhu	Bhutan	15	18	13	14	14	13	13	18	14
4	03_77H_024	NRSC			4369	GL	28° 6' 47.52"	89° 54' 33.12"	Brahmap-utra	Puna Tsang Chhu	Bhutan	42	48	49	47	46	45	45	49	47
5	03_77H_025	NRSC			4312	GL	28° 6' 19.44"	89° 53' 53.16"	Brahmap-utra	Puna Tsang Chhu	Bhutan	26	24	26	26	25	30	24	30	26
6	03_77H_029	NRSC			5049	GL	28° 0' 35.64"	89° 53' 0.96"	Brahmap-utra	Puna Tsang Chhu	Bhutan	21	23	24	28	26	24	23	28	25
7	03_77L_030	NRSC		BH_12	5305	GL	28° 16' 43.32"	90° 13' 32.88"	Brahmap-utra	Puna Tsang Chhu	Bhutan	79	92	96	90	90	92	90	96	92
8	03_77L_033	NRSC		BH_13	5176	GL	28° 15' 56.88"	90° 4' 7.68"	Brahmap-utra		Bhutan	177	215	220	213	214	212	212	220	215
9	03_77L_035	NRSC		BH_14	5486	GL	28° 14' 58.92"	90° 11' 13.56"	Brahmap-utra		Bhutan	68	61	64	62	68	63	61	68	64
10	03_77L_037	NRSC		BH_15	5139	GL	28° 14' 15.72"	90° 6' 15.48"	Brahmap-utra		Bhutan	542	584	633	588	581	578	578	633	593
11	03_77L_040	NRSC			4515	GL	28° 9' 14.76"	90° 8' 54.6"	Brahmap-utra	Puna Tsang Chhu	Bhutan	12	#	#	#	#	#	#	#	#
12	03_77L_044	NRSC		BH_19	4385	GL	28° 6' 20.88"	90° 14' 49.56"	Brahmap-utra	Puna Tsang Chhu	Bhutan	123	135	137	137	135	136	135	137	136
13	03_77L_047	NRSC			4364	GL	28° 6' 14.4"	90° 13' 49.08"	Brahmap-utra	Puna Tsang Chhu	Bhutan	23	40	48	46	48	47	40	48	46
14	03_77L_049	NRSC			4716	GL	28° 6' 44.28"	90° 1' 35.04"	Brahmap-utra	Puna Tsang Chhu	Bhutan	39	38	37	36	37	38	36	38	37

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude (N)	Longitude (E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
15	03_77L_051	NRSC		BH_22	4548	GL	28° 5' 31.2"	90° 17' 60"	Brahmap- utra	Puna Tsang Chhu	Bhutan	143	169	169	168	166	166	166	169	168
16	03_77L_054	NRSC			4717	GL	28° 5' 15"	90° 19' 33.24"	Brahmap- utra	Puna Tsang Chhu	Bhutan	17	#	#	6	6	6	6	6	6
17	03_77L_061	NRSC			5038	GL	28° 2' 29.4"	90° 32' 15.72"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	15	17	18	18	18	18	17	18	18
18	03_77L_062	NRSC			5295	GL	28° 2' 50.64"	90° 21' 16.92"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	42	47	48	48	46	47	46	48	47
19	03_77L_063	NRSC			5183	GL	28° 2' 6.36"	90° 37' 29.28"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	30	30	26	31	34	31	26	34	30
20	03_77L_065	NRSC			5025	GL	28° 2' 18.24"	90° 32' 47.76"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	17	13	17	17	17	17	13	17	16
21	03_77L_066	NRSC		BH_34	4896	GL	28° 1' 21.36"	90° 42' 29.88"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	148	173	171	176	173	172	171	176	173
22	03_77L_067	NRSC		BH_35	5231	GL	28° 2' 17.88"	90° 21' 50.4"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	78	79	83	83	82	82	79	83	82
23	03_77L_071	NRSC			5228	GL	28° 1' 41.52"	90° 16' 13.44"	Brahmap- utra	Puna Tsang Chhu	Bhutan	21	22	26	26	28	24	22	28	25
24	03_77L_072	NRSC		BH_40	5201	GL	28° 0' 55.8"	90° 22' 26.76"	Brahmap- utra	Manas Chhu &Mangde Chhu	Bhutan	91	78	90	99	97	89	78	99	91
25	03_77L_073	NRSC			5166	GL	28° 0' 23.04"	90° 34' 21.36"	Brahmap- utra	Manas Chhu &MangdeC hhu	Bhutan	12	13	14	14	14	14	13	14	14
26	03_77L_074	NRSC			5324	GL	28° 0' 55.44"	90° 21' 9.36"	Brahmap- utra	Manas Chhu &MangdeC hhu	Bhutan	18	13	18	18	18	17	13	18	17

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
27	03_77L_075	NRSC			4718	GL	28° 0' 11.16"	90° 32' 25.8"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	23	24	27	30	25	24	24	30	26
28	03_77L_078	NRSC			5296	GL	28° 0' 44.64"	90° 16' 46.92"	Brahmap-utra	Puna Tsang Chhu	Bhutan	12	17	18	16	33	15	15	33	20
29	03_77L_079	NRSC			5386	GL	28° 0' 21.24"	90° 19' 40.08"	Brahmap-utra	Puna Tsang Chhu	Bhutan	30	33	31	34	37	34	31	37	34
30	03_77L_082	NRSC			5019	GL	28° 0' 11.52"	90° 8' 59.64"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	14	12	17	15	15	14	12	17	15
31	03_78E_001	NRSC			5157	GL	27° 58' 54.12"	89° 53' 47.4"	Brahmap-utra	Puna Tsang Chhu	Bhutan	26	33	25	34	37	36	25	37	33
32	03_78E_002	NRSC		BH_57	5110	GL	27° 58' 21"	89° 55' 47.64"	Brahmap-utra	Puna Tsang Chhu	Bhutan	58	58	65	66	62	65	58	66	63
33	03_78E_003	NRSC			5152	GL	27° 58' 26.4"	89° 53' 44.88"	Brahmap-utra	Puna Tsang Chhu	Bhutan	21	23	27	28	26	25	23	28	26
34	03_78E_007	NRSC		BH_60	5008	GL	27° 56' 29.04"	89° 55' 48"	Brahmap-utra	Puna Tsang Chhu	Bhutan	61	70	68	67	73	73	67	73	70
35	03_78E_008	NRSC			5045	GL	27° 56' 27.6"	89° 54' 20.88"	Brahmap-utra	Puna Tsang Chhu	Bhutan	12	12	13	14	14	14	12	14	13
36	03_78E_011	NRSC			4952	GL	27° 55' 48.72"	89° 54' 2.88"	Brahmap-utra	Puna Tsang Chhu	Bhutan	13	22	25	21	18	21	18	25	21
37	03_78E_025	NRSC			4341	GL	27° 50' 20.4"	89° 23' 16.8"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	17	17	20	18	16	18	16	20	18
38	03_78E_027	NRSC			4808	GL	27° 41' 13.92"	89° 24' 29.88"	Brahmap-utra	Puna Tsang Chhu	Bhutan	13	20	20	21	17	18	17	21	19
39	03_78I_001	NRSC			5129	GL	27° 59' 52.44"	90° 35' 33"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	15	8	14	15	17	15	8	17	14
40	03_78I_004	NRSC			5194	GL	27° 59' 28.32"	90° 25' 6.24"	Brahmap-utra	Manas Chhu &MangdeChhu	Bhutan	36	27	36	40	42	39	27	42	37

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude (N)	Longitude (E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
41	03_78I_005	NRSC			5338	GL	27° 59' 47.04"	90° 17' 17.16"	Brahmaputra	Puna Tsang Chhu	Bhutan	40	44	42	43	48	42	42	48	44
42	03_78I_006	NRSC			5158	GL	27° 59' 43.08"	90° 15' 38.16"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	16	18	21	21	20	18	18	21	20
43	03_78I_008	NRSC			5252	GL	27° 59' 17.88"	90° 22' 48.36"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	14	14	14	15	15	13	13	15	14
44	03_78I_009	NRSC			5108	GL	27° 59' 6.36"	90° 26' 13.56"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	20	27	27	26	24	25	24	27	26
45	03_78I_011	NRSC			5239	GL	27° 58' 54.48"	90° 22' 52.32"	Brahmaputra	Kuri Chhu	Bhutan	19	21	18	21	20	20	18	21	20
46	03_78I_014	NRSC			5087	GL	27° 59' 13.2"	90° 7' 48.72"	Brahmaputra	Puna Tsang Chhu	Bhutan	21	19	27	20	18	18	18	27	20
47	03_78I_015	NRSC			5116	GL	27° 58' 55.2"	90° 14' 38.76"	Brahmaputra	Puna Tsang Chhu	Bhutan	16	16	18	19	18	18	16	19	18
48	03_78I_018	NRSC		BH_99	5083	GL	27° 58' 37.92"	90° 13' 56.28"	Brahmaputra	Puna Tsang Chhu	Bhutan	63	69	69	75	71	67	67	75	70
49	03_78I_019	NRSC			5224	GL	27° 58' 7.68"	90° 24' 42.48"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	18	24	24	24	20	23	20	24	23
50	03_78I_020	NRSC			5331	GL	27° 58' 13.8"	90° 19' 49.8"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	18	21	24	25	24	23	21	25	23
51	03_78I_022	NRSC			5048	GL	27° 56' 32.64"	90° 45' 22.32"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	16	16	17	17	17	16	16	17	17
52	03_78I_023	NRSC		BH_104	5055	GL	27° 56' 22.56"	90° 32' 5.28"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	51	60	#	63	62	60	60	63	61
53	03_78I_025	NRSC			5194	GL	27° 57' 7.92"	90° 15' 18.72"	Brahmaputra	Puna Tsang Chhu	Bhutan	12	14	15	15	12	12	12	15	14

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
54	03_78I_026	NRSC			5233	GL	27° 56' 26.88"	90° 23' 49.2"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	17	18	24	19	19	19	18	24	20
55	03_78I_028	NRSC			4792	GL	27° 55' 32.88"	90° 33' 17.64"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	24	24	32	31	33	30	24	33	30
56	03_78I_036	NRSC			5028	GL	27° 55' 51.96"	90° 12' 32.76"	Brahmaputra	Puna Tsang Chhu	Bhutan	11	13	12	12	13	13	12	13	13
57	03_78I_037	NRSC			5159	GL	27° 55' 10.2"	90° 24' 25.92"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	11	17	18	18	18	17	17	18	18
58	03_78I_038	NRSC			5143	GL	27° 55' 28.56"	90° 15' 30.6"	Brahmaputra	Puna Tsang Chhu	Bhutan	11	11	13	12	12	11	11	13	12
59	03_78I_040	NRSC			5167	GL	27° 55' 13.44"	90° 15' 46.44"	Brahmaputra	Puna Tsang Chhu	Bhutan	22	23	27	23	23	23	23	27	24
60	03_78I_043	NRSC			5000	GL	27° 53' 44.88"	90° 33' 7.2"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	28	24	30	24	25	23	23	30	25
61	03_78I_046	NRSC			5168	GL	27° 54' 21.96"	90° 16' 32.16"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	20	21	20	22	22	22	20	22	21
62	03_78I_051	NRSC		BH_132	5074	GL	27° 53' 26.16"	90° 17' 24.36"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	103	128	111	132	125	118	111	132	123
63	03_78I_054	NRSC			5138	GL	27° 52' 59.88"	90° 17' 53.16"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	14	17	15	16	17	16	15	17	16
64	03_78I_057	NRSC			5060	GL	27° 52' 24.24"	90° 18' 11.88"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	33	42	43	40	42	42	40	43	42
65	03_78I_058	NRSC			5041	GL	27° 52' 34.32"	90° 16' 50.52"	Brahmaputra	Manas Chhu & Mangde Chhu	Bhutan	16	29	27	30	31	20	20	31	27

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
66	03_78I_064	NRSC			4976	GL	27° 51' 41.04"	90° 17' 42.36"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	19	21	21	22	20	19	19	22	21
67	03_78I_065	NRSC			4668	GL	27° 49' 18.84"	90° 48' 36"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	13	15	17	16	12	12	12	17	14
68	03_78I_067	NRSC			4918	GL	27° 50' 44.16"	90° 18' 9"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	20	25	28	27	24	20	20	28	25
69	03_78I_072	NRSC			4788	GL	27° 49' 7.32"	90° 23' 39.12"	Brahmap-utra		Bhutan	11	12	17	#	12	11	11	17	13
70	03_78M_013	NRSC			4232	GL	27° 53' 43.08"	91° 14' 54.96"	Brahmap-utra	Puna Tsang Chhu	Bhutan	11	#	#	#	9	9	9	9	9
71	03_77H_019	NRSC			4804	GL	28° 10' 21.36"	89° 41' 3.48"	Brahmap-utra	Puna Tsang Chhu	Bhutan	10	10	11	10	10	10	10	11	10
72	03_77L_068	NRSC		BH_36	4764	WB	28° 0' 12.6"	90° 54' 18.36"	Brahmap-utra	Kuri Chhu	Bhutan	86	82	83	85	86	86	82	86	84
73	03_77L_077	NRSC		BH_45	5136	WB	28° 0' 54.36"	90° 12' 37.08"	Brahmap-utra	Puna Tsang Chhu	Bhutan	51	54	53	57	58	54	53	58	55
74	03_78E_028	NRSC		BH_72	2161	WB	27° 38' 21.12"	89° 44' 24.36"	Brahmap-utra	Puna Tsang Chhu	Bhutan	47	33	48	47	48	50	33	50	45
75	03_78E_029	NRSC		BH_73	4250	WB	27° 38' 37.68"	89° 27' 39.96"	Brahmap-utra	Puna Tsang Chhu	Bhutan	45	27	47	41	45	46	27	47	41
76	03_78I_048	NRSC		BH_129	4169	WB	27° 52' 0.84"	90° 48' 58.32"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	52	#	58	57	#	55	55	58	57
77	03_78I_056	NRSC		BH_137	4794	WB	27° 51' 42.48"	90° 35' 27.6"	Brahmap-utra	Manas Chhu &Mangde Chhu	Bhutan	76	77	82	84	82	82	77	84	81
78	03_78I_085	NRSC		BH_166	4764	WB	27° 47' 58.56"	90° 13' 50.16"	Brahmap-utra	Puna Tsang Chhu	Bhutan	70	122	71	79	79	80	71	122	86
79	03_78M_010	NRSC		BH_188	4496	WB	27° 52' 37.92"	91° 38' 1.68"	Brahmap-utra	Dangme Chhu	Bhutan	50	41	41	45	50	46	41	50	45

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
80	03_78M_019	NRSC		BH_194	4697	WB	27° 50' 49.92"	91° 34' 59.88"	Brahmap- utra	Dangme Chhu	Bhutan	55	53	53	53	46	49	46	53	51
81	03_78M_020	NRSC		BH_195	4157	WB	27° 50' 15.72"	91° 36' 18.36"	Brahmap- utra	Dangme Chhu	Bhutan	65	#	70	68	65	70	65	70	68
82	03_78M_022	NRSC		BH_197	4549	WB	27° 50' 2.04"	91° 33' 12.96"	Brahmap- utra	Dangme Chhu	Bhutan	67	62	67	72	68	70	62	72	68
83	01_52P_004	NRSC			5470	GL	32° 23' 7.08"	79° 40' 43.68"	Indus	Indus	China	14	#	#	#	#	#	#	#	#
84	01_53M_001	NRSC	33I		5576	GL	31° 59' 0.96"	79° 57' 30.96"	Indus	Indus	China	11	17	17	17	16	16	16	17	17
85	01_53M_002	NRSC	142I		5468	GL	31° 56' 57.12"	79° 59' 6.72"	Indus	Indus	China	11	10	12	12	10	10	10	12	11
86	01_53M_003	NRSC	110I		5511	GL	31° 56' 16.08"	79° 59' 39.84"	Indus	Indus	China	12	13	15	15	13	14	13	15	14
87	01_62B_002	NRSC	381I		4998	GL	30° 33' 9.72"	80° 24' 6.48"	Indus	Sutlej	China	14	28	37	37	39	32	28	39	35
88	01_62E_007	NRSC	437I		5641	GL	31° 17' 6.36"	81° 1' 53.04"	Indus	Sutlej	China	11	14	16	15	12	14	12	16	14
89	01_62E_016	NRSC	270I		5528	GL	31° 10' 42.6"	81° 9' 6.84"	Indus	Sutlej	China	21	20	20	20	21	20	20	21	20
90	01_62F_007	NRSC			5344	GL	30° 25' 36.48"	81° 52' 13.44"	Indus	Sutlej	China	16	22	24	22	21	21	21	24	22
91	01_62F_009	NRSC	387I		5712	GL	30° 23' 34.8"	81° 57' 48.6"	Indus	Sutlej	China	13	28	28	27	27	25	25	28	27
92	01_62F_010	NRSC	9I	CH_101	5250	GL	30° 23' 11.04"	81° 55' 47.64"	Indus	Sutlej	China	45	71	74	69	70	68	68	74	70
93	01_62J_004	NRSC	446I		5504	GL	30° 22' 33.96"	82° 1' 6.24"	Indus	Sutlej	China	12	11	11	11	11	10	10	11	11
94	02_62B_006	NRSC	495G		5106	GL	30° 24' 8.28"	80° 47' 4.92"	Ganga	Karnali	China	42	37	41	42	41	39	37	42	40
95	02_62F_009	NRSC	536G		5586	GL	30° 18' 7.2"	81° 23' 57.12"	Ganga	Karnali	China	11	11	12	12	11	10	10	12	11
96	02_62F_011	NRSC	362G		5524	GL	30° 17' 49.2"	81° 23' 16.8"	Ganga	Karnali	China	27	26	29	26	25	25	25	29	26
97	02_62F_013	NRSC	256G		5252	GL	30° 15' 56.88"	81° 20' 51"	Ganga	Karnali	China	24	49	56	50	51	50	49	56	51
98	02_62F_014	NRSC	236G		5481	GL	30° 14' 26.88"	81° 19' 53.4"	Ganga	Karnali	China	12	#	#	8	6	6	6	8	7
99	02_62F_015	NRSC	59G		5359	GL	30° 13' 58.8"	81° 20' 57.48"	Ganga	Karnali	China	37	36	31	31	27	26	26	36	30
100	02_71H_004	NRSC			5239	GL	28° 39' 46.08"	85° 28' 31.8"	Ganga	Arun Kosi	China	19	27	39	29	55	28	27	55	36
101	02_71H_005	NRSC			5010	GL	28° 38' 47.4"	85° 29' 37.68"	Ganga	Arun Kosi	China	27	72	79	90	70	100	70	100	82
102	02_71H_006	NRSC			5167	GL	28° 38' 33.72"	85° 28' 22.8"	Ganga	Arun Kosi	China	38	34	34	34	35	34	34	35	34

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
103	02_71H_007	NRSC		CH_127	5149	GL	28° 37' 25.68"	85° 30' 33.84"	Ganga	Arun Kosi	China	125	119	118	123	121	121	118	123	120
104	02_71H_008	NRSC		CH_128	5152	GL	28° 37' 1.56"	85° 31' 35.4"	Ganga	Arun Kosi	China	95	104	101	111	117	106	101	117	108
105	02_71H_009	NRSC			5448	GL	28° 34' 50.16"	85° 35' 41.28"	Ganga	Arun Kosi	China	31	25	21	27	28	28	21	28	26
106	02_71H_010	NRSC			5481	GL	28° 34' 32.16"	85° 34' 59.52"	Ganga	Arun Kosi	China	27	25	27	30	28	27	25	30	27
107	02_71H_011	NRSC	775G		4509	GL	28° 34' 9.48"	85° 27' 24.12"	Ganga	Trishuli	China	19	29	28	29	28	27	27	29	28
108	02_71H_012	NRSC		CH_132	5379	GL	28° 33' 49.68"	85° 36' 14.76"	Ganga	Arun Kosi	China	89	159	146	130	116	141	116	159	138
109	02_71H_013	NRSC	172G		4446	GL	28° 34' 0.12"	85° 27' 50.04"	Ganga	Trishuli	China	21	17	25	18	16	17	16	25	19
110	02_71H_014	NRSC			4458	GL	28° 33' 50.4"	85° 28' 3.36"	Ganga	Trishuli	China	12	10	10	10	10	10	10	10	10
111	02_71H_015	NRSC		CH_135	5367	GL	28° 31' 58.8"	85° 36' 30.96"	Ganga	Arun Kosi	China	515	556	567	555	549	550	549	567	555
112	02_71H_016	NRSC			5305	GL	28° 31' 40.8"	85° 38' 14.64"	Ganga	Arun Kosi	China	33	26	29	29	29	29	26	29	28
113	02_71H_017	NRSC		CH_137	5314	GL	28° 29' 43.44"	85° 38' 9.24"	Ganga	Arun Kosi	China	493	506	505	528	494	487	487	528	504
114	02_71H_018	NRSC	123G		4787	GL	28° 30' 31.68"	85° 29' 36.6"	Ganga	Trishuli	China	20	31	#	33	32	32	31	33	32
115	02_71H_019	NRSC	92G		4674	GL	28° 30' 36.36"	85° 26' 44.52"	Ganga	Trishuli	China	16	12	#	14	13	12	12	14	13
116	02_71H_020	NRSC			5354	GL	28° 29' 11.76"	85° 44' 8.88"	Ganga	Arun Kosi	China	29	74	80	47	75	75	47	80	70
117	02_71H_021	NRSC	76G	CH_141	4463	GL	28° 28' 6.6"	85° 31' 7.68"	Ganga	Trishuli	China	48	44	45	43	48	46	43	48	45
118	02_71H_022	NRSC			5735	GL	28° 27' 41.76"	85° 40' 55.92"	Ganga	Arun Kosi	China	17	18	27	24	19	18	18	27	21
119	02_71H_023	NRSC			5595	GL	28° 26' 42.36"	85° 46' 46.92"	Ganga	Arun Kosi	China	41	57	65	70	70	66	57	70	66
120	02_71H_024	NRSC	155G		4890	GL	28° 25' 35.76"	85° 33' 44.28"	Ganga	Trishuli	China	22	27	30	24	23	22	22	30	25
121	02_71H_025	NRSC	464G		5303	GL	28° 24' 23.4"	85° 35' 16.08"	Ganga	Trishuli	China	12	19	16	17	19	18	16	19	18
122	02_71H_027	NRSC	2G	CH_147	5242	GL	28° 21' 40.32"	85° 52' 12.36"	Ganga	Sun Kosi	China	501	427	431	465	464	453	427	465	448
123	02_71H_029	NRSC	1G	CH_149	5098	GL	28° 19' 14.16"	85° 50' 21.12"	Ganga	Sun Kosi	China	413	539	516	581	544	539	516	581	544
124	02_71H_030	NRSC	598G		5411	GL	28° 19' 28.56"	85° 54' 24.84"	Ganga	Sun Kosi	China	15	14	14	16	16	14	14	16	15
125	02_71H_031	NRSC	78G		5268	GL	28° 18' 54"	85° 56' 50.28"	Ganga	Sun Kosi	China	20	25	61	34	27	25	25	61	34
126	02_71H_032	NRSC			5116	GL	28° 17' 55.32"	85° 49' 8.4"	Ganga	Sun Kosi	China	22	25	27	24	28	27	24	28	26

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127	02_71L_004	NRSC	5G	CH_159	5518	GL	28° 23' 40.92"	86° 22' 45.12"	Ganga	Arun Kosi	China	79	128	120	125	129	125	120	129	125
128	02_71L_005	NRSC	282G		5524	GL	28° 23' 33.72"	86° 24' 52.56"	Ganga	Arun Kosi	China	18	18	17	17	18	18	17	18	18
129	02_71L_006	NRSC	3G	CH_161	5365	GL	28° 22' 26.76"	86° 18' 16.56"	Ganga	Arun Kosi	China	379	405	396	411	390	392	390	411	399
130	02_71L_007	NRSC	572G		5576	GL	28° 22' 54.84"	86° 23' 3.84"	Ganga	Arun Kosi	China	15	13	13	13	13	13	13	13	13
131	02_71L_008	NRSC	457G		5577	GL	28° 22' 31.08"	86° 15' 27"	Ganga	Sun Kosi	China	24	40	42	43	40	39	39	43	41
132	02_71L_009	NRSC	520G		5546	GL	28° 20' 53.16"	86° 29' 35.16"	Ganga	Arun Kosi	China	38	33	36	35	33	34	33	36	34
133	02_71L_010	NRSC	185G	CH_165	5387	GL	28° 20' 54.96"	86° 13' 30"	Ganga	Sun Kosi	China	47	66	68	69	66	67	66	69	67
134	02_71L_011	NRSC	61G	CH_166	5439	GL	28° 20' 7.44"	86° 11' 30.12"	Ganga	Sun Kosi	China	64	52	53	55	54	52	52	55	53
135	02_71L_012	NRSC	96G		5570	GL	28° 19' 15.24"	86° 9' 30.96"	Ganga	Sun Kosi	China	25	21	22	22	22	18	18	22	21
136	02_71L_013	NRSC	58G	CH_168	5324	GL	28° 18' 12.24"	86° 9' 27.36"	Ganga	Sun Kosi	China	64	51	51	62	62	57	51	62	57
137	02_71L_014	NRSC	240G		5364	GL	28° 17' 43.08"	86° 9' 28.8"	Ganga	Sun Kosi	China	18	14	17	17	17	17	14	17	16
138	02_71L_015	NRSC	284G		5261	GL	28° 17' 38.76"	86° 7' 52.32"	Ganga	Sun Kosi	China	27	22	25	25	26	25	22	26	25
139	02_71L_016	NRSC	570G		5345	GL	28° 16' 12.36"	86° 11' 12.12"	Ganga	Sun Kosi	China	13	9	8	13	13	9	8	13	10
140	02_71L_017	NRSC	179G		5211	GL	28° 15' 11.16"	86° 6' 10.44"	Ganga	Sun Kosi	China	15	13	15	18	17	15	13	18	16
141	02_71L_018	NRSC	651G		5377	GL	28° 14' 44.88"	86° 19' 17.4"	Ganga	Sun Kosi	China	21	15	18	18	16	14	14	18	16
142	02_71L_019	NRSC	323G		5378	GL	28° 14' 56.04"	86° 9' 21.6"	Ganga	Sun Kosi	China	14	13	15	16	13	13	13	16	14
143	02_71L_020	NRSC	156G		5348	GL	28° 14' 23.28"	86° 21' 55.44"	Ganga	Sun Kosi	China	30	29	26	26	27	26	26	29	27
144	02_71L_021	NRSC	438G		5373	GL	28° 14' 33.36"	86° 11' 45.6"	Ganga	Sun Kosi	China	19	17	17	18	18	17	17	18	17
145	02_71L_022	NRSC	715G		5554	GL	28° 12' 26.28"	86° 37' 45.84"	Ganga	Arun Kosi	China	24	27	27	26	27	26	26	27	27
146	02_71L_023	NRSC	39G	CH_178	5106	GL	28° 11' 50.64"	86° 34' 54.12"	Ganga	Arun Kosi	China	116	136	128	145	120	124	120	145	131
147	02_71L_024	NRSC	245G		5263	GL	28° 11' 37.68"	86° 18' 51.12"	Ganga	Sun Kosi	China	23	28	30	31	28	27	27	31	29
148	02_71L_025	NRSC	154G		5357	GL	28° 11' 33.72"	86° 21' 1.8"	Ganga	Sun Kosi	China	16	20	23	20	20	18	18	23	20
149	02_71L_026	NRSC	73G	CH_181	5057	GL	28° 11' 8.52"	86° 31' 54.12"	Ganga	Sun Kosi	China	59	70	#	70	66	65	65	70	68
150	02_71L_027	NRSC	433G		5234	GL	28° 9' 28.8"	86° 32' 7.08"	Ganga	Sun Kosi	China	18	18	20	20	18	18	18	20	19

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151	02_71L_028	NRSC	38G	CH_183	5027	GL	28° 8' 8.88"	86° 31' 45.48"	Ganga	Sun Kosi	China	79	101	111	118	114	112	101	118	111
152	02_71L_029	NRSC	747G		5237	GL	28° 6' 52.2"	86° 51' 45.72"	Ganga	Arun Kosi	China	30	58	66	69	60	57	57	69	62
153	02_71L_030	NRSC	242G		5242	GL	28° 4' 22.8"	86° 31' 12.72"	Ganga	Sun Kosi	China	19	19	27	23	24	22	19	27	23
154	02_71L_031	NRSC	52G		4682	GL	28° 4' 48"	86° 3' 56.16"	Ganga	Sun Kosi	China	33	28	31	34	33	31	28	34	31
155	02_71L_032	NRSC	122G	CH_187	5250	GL	28° 2' 40.2"	86° 30' 49.32"	Ganga	Sun Kosi	China	58	56	56	60	57	55	55	60	57
156	02_71L_034	NRSC	89G	CH_188	5095	GL	28° 2' 9.6"	86° 29' 46.32"	Ganga	Sun Kosi	China	46	80	80	75	88	97	75	97	84
157	02_71L_033	NRSC	408G		5369	GL	28° 2' 18.96"	86° 42' 34.56"	Ganga	Sun Kosi	Nepal	17	14	16	16	16	16	14	16	16
158	02_71L_035	NRSC	657G		5091	GL	28° 1' 22.8"	86° 43' 14.16"	Ganga	Sun Kosi	Nepal	19	15	20	23	18	19	15	23	19
159	02_71P_001	NRSC			5498	GL	28° 50' 26.88"	87° 30' 28.08"	Ganga	Arun Kosi	China	24	19	28	28	29	26	19	29	26
160	02_71P_017	NRSC			4194	GL	28° 24' 25.56"	87° 45' 54"	Ganga	Arun Kosi	China	17	64	#	#	#	168	64	168	116
161	02_71P_019	NRSC		CH_207	4199	GL	28° 21' 8.64"	87° 52' 30.36"	Ganga	Arun Kosi	China	48	47	303	305	210	225	47	305	218
162	02_71P_020	NRSC			4200	GL	28° 20' 48.84"	87° 53' 6.72"	Ganga	Arun Kosi	China	26	76	303	305	210	225	76	305	224
163	02_71P_022	NRSC	34G	CH_210	5439	GL	28° 13' 45.84"	87° 35' 27.6"	Ganga	Arun Kosi	China	80	84	82	88	82	81	81	88	83
164	02_71P_023	NRSC	124G		5235	GL	28° 14' 8.52"	87° 30' 1.8"	Ganga	Arun Kosi	China	26	22	25	25	25	24	22	25	24
165	02_71P_024	NRSC	576G		5273	GL	28° 13' 41.52"	87° 34' 39.36"	Ganga	Arun Kosi	China	26	24	19	22	23	22	19	24	22
166	02_71P_026	NRSC	322G		5340	GL	28° 12' 23.04"	87° 33' 37.8"	Ganga	Arun Kosi	China	16	15	18	16	22	15	15	22	17
167	02_71P_027	NRSC	82G	CH_215	5389	GL	28° 11' 40.2"	87° 38' 26.52"	Ganga	Arun Kosi	China	49	53	49	50	51	51	49	53	51
168	02_71P_028	NRSC		CH_216	4997	GL	28° 12' 21.6"	87° 3' 7.56"	Ganga	Arun Kosi	China	50	62	71	68	61	56	56	71	64
169	02_71P_029	NRSC	43G	CH_217	5045	GL	28° 10' 42.24"	87° 33' 41.4"	Ganga	Arun Kosi	China	80	122	104	106	108	105	104	122	109
170	02_71P_030	NRSC	166G		5329	GL	28° 10' 21.36"	87° 28' 44.76"	Ganga	Arun Kosi	China	18	19	28	24	19	23	19	28	23
171	02_71P_031	NRSC	141G		5395	GL	28° 10' 3.36"	87° 37' 23.16"	Ganga	Arun Kosi	China	22	21	19	21	22	20	19	22	21
172	02_71P_032	NRSC	564G		5190	GL	28° 9' 49.32"	87° 34' 40.8"	Ganga	Arun Kosi	China	22	17	20	20	20	20	17	20	19
173	02_71P_033	NRSC			4888	GL	28° 9' 36.72"	87° 26' 36.6"	Ganga	Arun Kosi	China	31	26	23	26	32	33	23	33	28
174	02_71P_034	NRSC	726G		5259	GL	28° 9' 18"	87° 36' 46.44"	Ganga	Arun Kosi	China	23	20	27	24	25	22	20	27	24

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
175	02_71P_036	NRSC	54G		5121	GL	28° 8' 51.36"	87° 28' 6.96"	Ganga	Arun Kosi	China	32	37	28	39	40	40	28	40	37
176	02_71P_038	NRSC	586G		5483	GL	28° 8' 33.36"	87° 6' 42.12"	Ganga	Arun Kosi	China	23	28	28	28	44	28	28	44	31
177	02_71P_039	NRSC	396G		5489	GL	28° 8' 32.64"	87° 6' 19.08"	Ganga	Arun Kosi	China	15	18	20	21	19	19	18	21	19
178	02_71P_041	NRSC	768G		5064	GL	28° 6' 56.16"	87° 35' 12.84"	Ganga	Arun Kosi	China	17	25	22	20	18	17	17	25	20
179	02_71P_042	NRSC	654G		5524	GL	28° 7' 46.56"	87° 4' 55.56"	Ganga	Arun Kosi	China	20	22	20	21	22	20	20	22	21
180	02_71P_043	NRSC	18G	CH_231	5206	GL	28° 5' 36.6"	87° 38' 15"	Ganga	Arun Kosi	China	67	84	81	86	87	87	81	87	85
181	02_71P_044	NRSC	557G		5555	GL	28° 6' 540"	87° 4' 34.68"	Ganga	Arun Kosi	China	12	11	8	12	13	11	8	13	11
182	02_71P_046	NRSC	317G		4898	GL	28° 4' 9.84"	87° 8' 13.2"	Ganga	Arun Kosi	China	25	28	25	30	27	27	25	30	27
183	02_71P_047	NRSC	81G	CH_235	5614	GL	28° 4' 9.48"	87° 2' 53.88"	Ganga	Arun Kosi	China	80	96	102	94	100	94	94	102	97
184	02_71P_048	NRSC	283G		5094	GL	28° 3' 6.84"	87° 37' 36.48"	Ganga	Arun Kosi	China	17	19	19	19	18	18	18	19	19
185	02_72I_004	NRSC	9G	CH_244	5074	GL	27° 56' 45.96"	86° 26' 47.4"	Ganga	Sun Kosi	China	121	205	205	200	204	218	200	218	206
186	02_72I_008	NRSC	99G		5040	GL	27° 55' 44.4"	86° 26' 0.6"	Ganga	Sun Kosi	China	32	36	36	35	36	31	31	36	35
187	02_72M_001	NRSC	737G		5675	GL	27° 59' 21.48"	87° 52' 5.16"	Ganga	Arun Kosi	China	10	7	7	8	8	7	7	8	7
188	02_72M_003	NRSC	823G		5608	GL	27° 58' 5.88"	87° 53' 3.84"	Ganga	Arun Kosi	China	20	17	22	18	18	17	17	22	18
189	02_72M_004	NRSC	336G		5293	GL	27° 57' 46.44"	87° 48' 42.12"	Ganga	Arun Kosi	China	35	68	48	49	51	48	48	68	53
190	02_72M_005	NRSC	139G	CH_251	5141	GL	27° 56' 57.12"	87° 55' 51.96"	Ganga	Arun Kosi	China	71	80	80	81	85	81	80	85	81
191	02_72M_006	NRSC	349G	CH_252	5188	GL	27° 57' 2.16"	87° 54' 31.68"	Ganga	Arun Kosi	China	65	65	66	66	65	64	64	66	65
192	02_72M_007	NRSC	33G	CH_253	4950	GL	27° 55' 35.04"	87° 46' 11.64"	Ganga	Arun Kosi	China	94	102	101	107	110	105	101	110	105
193	02_77D_005	NRSC	499G		5738	GL	28° 3' 52.92"	88° 32' 38.04"	Ganga	Arun Kosi	China	11	7	7	7	7	7	7	7	7
194	02_77D_006	NRSC		CH_261	4894	GL	28° 3' 21.6"	88° 25' 35.4"	Ganga	Arun Kosi	China	80	88	80	92	103	104	80	104	93
195	02_77D_007	NRSC	244G	CH_262	5215	GL	28° 1' 23.88"	88° 21' 16.2"	Ganga	Arun Kosi	China	55	60	58	57	57	56	56	60	58
196	02_77D_008	NRSC	266G	CH_263	5285	GL	28° 1' 6.24"	88° 17' 14.28"	Ganga	Arun Kosi	China	45	50	49	51	48	50	48	51	50
197	02_77D_009	NRSC	71G	CH_264	5296	GL	28° 0' 37.08"	88° 15' 29.52"	Ganga	Arun Kosi	China	58	#	62	62	#	62	62	62	62
198	02_77D_010	NRSC	590G		5127	GL	28° 0' 57.6"	88° 19' 10.92"	Ganga	Arun Kosi	China	34	42	39	37	38	37	37	42	39

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude (N)	Longitude (E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
199	02_77D_011	NRSC	393G		5305	GL	28° 0' 19.08"	88° 14' 26.88"	Ganga	Arun Kosi	China	39	30	53	46	41	45	30	53	43
200	02_78A_001	NRSC	498G		5201	GL	27° 59' 46.68"	88° 24' 7.2"	Ganga	Arun Kosi	China	16	20	25	25	22	19	19	25	22
201	02_78A_002	NRSC	668G		5397	GL	27° 59' 21.48"	88° 13' 15.96"	Ganga	Arun Kosi	China	17	16	19	18	16	14	14	19	17
202	02_78A_003	NRSC	24G	CH_269	5522	GL	27° 56' 46.68"	88° 4' 30.72"	Ganga	Arun Kosi	China	124	192	180	178	182	177	177	192	182
203	02_78A_004	NRSC	194G	CH_270	5603	GL	27° 55' 58.08"	88° 4' 48"	Ganga	Arun Kosi	China	84	123	145	120	119	124	119	145	126
204	02_78A_005	NRSC		CH_271	5376	GL	27° 55' 41.16"	88° 0' 10.08"	Ganga	Arun Kosi	China	89	110	121	120	111	118	110	121	116
205	02_78A_006	NRSC	676G		5743	GL	27° 55' 39"	88° 1' 11.64"	Ganga	Arun Kosi	China	16	18	17	17	16	#	16	18	17
206	03_77H_009	NRSC			5150	GL	28° 14' 54.24"	89° 51' 5.76"	Brahmap-utra		China	15	11	17	13	15	15	11	17	14
207	03_77H_010	NRSC			5518	GL	28° 14' 22.92"	89° 57' 46.08"	Brahmap-utra		China	13	14	15	14	14	13	13	15	14
208	03_77L_038	NRSC			5521	GL	28° 13' 29.64"	90° 15' 26.64"	Brahmap-utra		China	30	13	14	14	14	14	13	14	14
209	03_77L_039	NRSC			5457	GL	28° 12' 19.44"	90° 23' 7.08"	Brahmap-utra	Kuri Chhu	China	38	43	49	44	43	44	43	49	45
210	03_77L_057	NRSC			4897	GL	28° 3' 35.28"	90° 36' 12.24"	Brahmap-utra	Kuri Chhu	China	36	50	50	45	56	50	45	56	50
211	03_77L_058	NRSC			5016	GL	28° 2' 53.88"	90° 35' 49.2"	Brahmap-utra	Kuri Chhu	China	28	32	27	34	34	33	27	34	32
212	03_62J_003	NRSC			5553	GL	30° 48' 40.32"	82° 45' 14.04"	Brahmap-utra		China	11	11	10	11	9	10	9	11	10
213	03_62J_004	NRSC			5556	GL	30° 48' 25.56"	82° 44' 58.92"	Brahmap-utra		China	14	18	16	14	14	14	14	18	15
214	03_62J_009	NRSC			5624	GL	30° 33' 45.72"	82° 55' 14.16"	Brahmap-utra		China	28	21	25	25	26	27	21	27	25
215	03_62J_010	NRSC			5571	GL	30° 33' 3.96"	82° 57' 27"	Brahmap-utra		China	27	28	25	29	30	27	25	30	28
216	03_62J_016	NRSC		CH_288	5303	GL	30° 21' 43.92"	82° 3' 17.28"	Brahmap-utra		China	44	53	60	58	50	51	50	60	54
217	03_62J_020	NRSC			5603	GL	30° 20' 25.8"	82° 8' 26.16"	Brahmap-utra		China	18	15	16	15	15	15	15	16	15

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218	03_62J_024	NRSC			5548	GL	30° 18' 35.64"	82° 11' 58.92"	Brahmap- utra		China	31	20	19	19	20	19	19	20	19
219	03_62J_025	NRSC			5362	GL	30° 16' 55.92"	82° 10' 2.64"	Brahmap- utra		China	19	27	32	29	23	15	15	32	25
220	03_62J_026	NRSC		CH_298	5078	GL	30° 15' 21.6"	82° 12' 34.2"	Brahmap- utra		China	103	137	133	137	136	138	133	138	136
221	03_62J_027	NRSC			4781	GL	30° 15' 23.76"	82° 35' 21.12"	Brahmap- utra		China	19	23	23	22	22	21	21	23	22
222	03_62J_028	NRSC			5603	GL	30° 13' 18.48"	82° 13' 58.44"	Brahmap- utra		China	37	43	41	42	43	41	41	43	42
223	03_62J_031	NRSC		CH_303	4897	GL	30° 6' 14.04"	82° 16' 10.56"	Brahmap- utra		China	160	218	240	241	236	234	218	241	234
224	03_62J_032	NRSC		CH_304	4857	GL	30° 4' 42.6"	82° 20' 32.28"	Brahmap- utra		China	81	93	#	94	91	89	89	94	92
225	03_62K_005	NRSC			4999	GL	29° 58' 10.2"	82° 29' 39.84"	Brahmap- utra		China	21	24	24	26	22	23	22	26	24
226	03_62K_006	NRSC			5101	GL	29° 57' 47.52"	82° 30' 27"	Brahmap- utra		China	21	25	28	27	26	25	25	28	26
227	03_62K_007	NRSC			4911	GL	29° 56' 22.56"	82° 36' 7.56"	Brahmap- utra		China	25	29	22	29	30	29	22	30	28
228	03_62K_008	NRSC			4968	GL	29° 55' 26.76"	82° 37' 4.44"	Brahmap- utra		China	36	42	45	43	41	41	41	45	42
229	03_62K_009	NRSC		CH_313	5079	GL	29° 50' 25.8"	82° 47' 0.6"	Brahmap- utra		China	250	318	328	347	325	312	312	347	326
230	03_62K_010	NRSC			5181	GL	29° 47' 45.96"	82° 51' 10.08"	Brahmap- utra		China	41	70	67	70	66	65	65	70	68
231	03_62K_011	NRSC			5136	GL	29° 45' 46.44"	82° 53' 6.36"	Brahmap- utra		China	33	48	42	44	45	45	42	48	45
232	03_62K_012	NRSC		CH_316	5368	GL	29° 44' 7.8"	82° 58' 26.04"	Brahmap- utra		China	73	92	100	93	92	90	90	100	93
233	03_62K_013	NRSC			5101	GL	29° 41' 17.88"	82° 59' 2.4"	Brahmap- utra		China	37	45	48	50	46	45	45	50	47

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234	03_62O_031	NRSC			5381	GL	29° 41' 40.2"	83° 1' 33.96"	Brahmaputra		China	28	34	41	38	37	36	34	41	37
235	03_62O_035	NRSC			5256	GL	29° 39' 19.44"	83° 6' 21.24"	Brahmaputra		China	29	30	34	34	33	33	30	34	33
236	03_62O_045	NRSC			5566	GL	29° 13' 17.4"	83° 41' 9.6"	Brahmaputra		China	11	9	10	10	10	10	9	10	10
237	03_71B_001	NRSC			5692	GL	30° 34' 48"	84° 4' 37.2"	Brahmaputra		China	27	29	28	28	27	26	26	29	28
238	03_71C_001	NRSC			5543	GL	29° 54' 51.84"	84° 36' 2.88"	Brahmaputra		China	11	9	9	9	9	9	9	9	9
239	03_71C_002	NRSC			5663	GL	29° 53' 15"	84° 32' 13.2"	Brahmaputra		China	12	11	11	11	12	10	10	12	11
240	03_71C_003	NRSC		CH_396	5412	GL	29° 51' 59.76"	84° 37' 26.4"	Brahmaputra		China	47	49	49	50	49	49	49	50	49
241	03_71C_004	NRSC			5575	GL	29° 51' 22.68"	84° 37' 56.28"	Brahmaputra		China	15	14	13	15	16	14	13	16	14
242	03_71C_005	NRSC		CH_398	5551	GL	29° 50' 43.8"	84° 40' 32.16"	Brahmaputra		China	57	49	49	52	52	53	49	53	51
243	03_71C_006	NRSC			5482	GL	29° 49' 4.8"	84° 41' 27.96"	Brahmaputra		China	22	21	26	21	27	23	21	27	24
244	03_71D_001	NRSC			5454	GL	28° 55' 44.76"	84° 18' 2.52"	Brahmaputra		China	21	21	21	20	20	19	19	21	20
245	03_71D_002	NRSC			5574	GL	28° 54' 30.6"	84° 30' 25.56"	Brahmaputra		China	30	36	43	37	34	34	34	43	37
246	03_71D_003	NRSC			5362	GL	28° 54' 33.84"	84° 20' 51.72"	Brahmaputra		China	11	10	#	10	10	10	10	10	10
247	03_71P_002	NRSC			5537	GL	28° 48' 13.32"	87° 37' 28.2"	Brahmaputra		China	13	17	20	17	17	16	16	20	17
248	03_71P_003	NRSC			5360	GL	28° 47' 47.76"	87° 38' 26.52"	Brahmaputra		China	23	21	18	25	28	26	18	28	24
249	03_71P_004	NRSC			5637	GL	28° 47' 55.68"	87° 36' 12.24"	Brahmaputra		China	12	15	13	12	12	11	11	15	13

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250	03_77H_005	NRSC			5113	GL	28° 16' 48"	89° 59' 37.68"	Brahmap-utra		China	37	78	54	#	#	3	3	78	45
251	03_77H_012	NRSC		CH_483	4723	GL	28° 14' 25.44"	89° 41' 41.28"	Brahmap-utra		China	76	69	79	72	70	69	69	79	72
252	03_77H_013	NRSC		CH_484	4950	GL	28° 12' 32.04"	89° 44' 42.72"	Brahmap-utra		China	48	45	43	#	45	44	43	45	44
253	03_77H_015	NRSC			4801	GL	28° 12' 10.44"	89° 42' 46.8"	Brahmap-utra		China	12	14	17	17	14	13	13	17	15
254	03_77H_016	NRSC			4929	GL	28° 11' 10.32"	89° 35' 51"	Brahmap-utra		China	38	33	33	34	34	33	33	34	33
255	03_77H_022	NRSC			4936	GL	28° 8' 58.2"	89° 33' 52.56"	Brahmap-utra		China	19	19	18	19	19	19	18	19	19
256	03_77H_026	NRSC			5233	GL	28° 7' 24.6"	89° 30' 47.52"	Brahmap-utra		China	12	10	10	11	11	10	10	11	10
257	03_77H_027	NRSC			4927	GL	28° 5' 14.28"	89° 28' 50.16"	Brahmap-utra		China	21	23	21	22	23	22	21	23	22
258	03_77H_032	NRSC			5056	GL	28° 1' 33.6"	89° 26' 59.64"	Brahmap-utra		China	11	10	12	12	11	11	10	12	11
259	03_77J_001	NRSC			5354	GL	30° 30' 7.2"	90° 54' 46.08"	Brahmap-utra		China	26	29	28	29	28	29	28	29	29
260	03_77J_002	NRSC			5254	GL	30° 29' 57.12"	90° 56' 52.8"	Brahmap-utra		China	12	13	14	15	14	13	13	15	14
261	03_77J_005	NRSC			5766	GL	30° 4' 29.64"	90° 9' 24.48"	Brahmap-utra		China	12	14	13	13	13	13	13	14	13
262	03_77K_002	NRSC			5154	GL	29° 54' 43.92"	90° 3' 46.8"	Brahmap-utra		China	38	38	#	38	35	36	35	38	37
263	03_77K_003	NRSC			5303	GL	29° 52' 22.08"	90° 0' 28.08"	Brahmap-utra		China	14	15	17	15	15	14	14	17	15
264	03_77L_019	NRSC			5681	GL	28° 22' 45.84"	90° 5' 41.28"	Brahmap-utra		China	13	15	16	16	16	15	15	16	16
265	03_77L_020	NRSC			4682	GL	28° 20' 3.48"	90° 40' 26.4"	Brahmap-utra	Kuri Chhu	China	14	11	#	12	11	11	11	12	11

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
266	03_77L_022	NRSC			4810	GL	28° 18' 14.76"	90° 44' 27.6"	Brahmap- utra	Kuri Chhu	China	12	12	13	10	8	11	8	13	11
267	03_77L_023	NRSC			5489	GL	28° 18' 3.6"	90° 38' 48.84"	Brahmap- utra	Kuri Chhu	China	33	32	33	33	33	31	31	33	32
268	03_77L_025	NRSC			5370	GL	28° 18' 0.72"	90° 36' 29.52"	Brahmap- utra	Kuri Chhu	China	15	12	20	18	15	14	12	20	16
269	03_77L_028	NRSC			4632	GL	28° 16' 15.24"	90° 43' 19.2"	Brahmap- utra	Kuri Chhu	China	12	13	18	18	16	10	10	18	15
270	03_77L_029	NRSC		CH_545	5451	GL	28° 16' 22.8"	90° 35' 24.36"	Brahmap- utra	Kuri Chhu	China	45	46	51	48	48	47	46	51	48
271	03_77L_031	NRSC			4698	GL	28° 14' 52.08"	90° 42' 43.2"	Brahmap- utra	Kuri Chhu	China	21	15	21	21	18	18	15	21	19
272	03_77L_032	NRSC		CH_547	4669	GL	28° 14' 32.64"	90° 43' 38.28"	Brahmap- utra	Kuri Chhu	China	105	95	105	99	93	97	93	105	98
273	03_77L_034	NRSC			5500	GL	28° 14' 31.2"	90° 30' 23.76"	Brahmap- utra	Kuri Chhu	China	21	21	21	22	21	21	21	22	21
274	03_77L_036	NRSC			5810	GL	28° 14' 17.52"	90° 29' 45.96"	Brahmap- utra	Kuri Chhu	China	31	23	#	#	26	#	23	26	25
275	03_77L_041	NRSC		CH_550	5214	GL	28° 7' 24.6"	90° 34' 0.12"	Brahmap- utra	Kuri Chhu	China	56	64	68	65	64	64	64	68	65
276	03_77L_042	NRSC		CH_551	5057	GL	28° 5' 56.4"	90° 44' 23.28"	Brahmap- utra	Kuri Chhu	China	57	70	70	72	71	69	69	72	70
277	03_77L_043	NRSC		CH_552	5200	GL	28° 5' 21.84"	90° 47' 18.6"	Brahmap- utra	Kuri Chhu	China	181	227	252	250	241	243	227	252	243
278	03_77L_045	NRSC			5224	GL	28° 5' 7.8"	90° 36' 17.64"	Brahmap- utra	Kuri Chhu	China	32	37	36	35	36	37	35	37	36
279	03_77L_048	NRSC			4792	GL	28° 3' 48.24"	90° 54' 10.08"	Brahmap- utra	Kuri Chhu	China	21	26	68	#	53	106	26	106	63
280	03_77L_053	NRSC			4793	GL	28° 3' 12.96"	90° 54' 8.28"	Brahmap- utra	Kuri Chhu	China	25	#	68	#	53	106	53	106	76
281	03_77L_056	NRSC			4963	GL	28° 2' 46.32"	90° 55' 6.96"	Brahmap- utra	Kuri Chhu	China	16	14	17	16	17	18	14	18	16

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
282	03_77P_021	NRSC		CH_592	4749	GL	28° 2' 15"	91° 27' 6.48"	Brahmap-utra	Dangme Chhu	China	61	52	57	60	55	58	52	60	56
283	03_78A_004	NRSC			5456	GL	27° 57' 55.44"	88° 53' 37.68"	Brahmap-utra		China	26	23	24	25	25	24	23	25	24
284	03_78A_011	NRSC			5168	GL	27° 53' 60"	88° 55' 45.84"	Brahmap-utra	Amo Chhu	China	14	17	15	16	15	13	13	17	15
285	03_78A_025	NRSC			4888	GL	27° 38' 10.32"	88° 48' 57.96"	Brahmap-utra	Amo Chhu	China	10	10	12	12	13	11	10	13	12
286	03_78A_030	NRSC			4447	GL	27° 25' 12.36"	88° 48' 45"	Brahmap-utra	Amo Chhu	China	17	17	18	16	16	16	16	18	17
287	03_78E_016	NRSC			5004	GL	27° 53' 2.04"	89° 21' 2.52"	Brahmap-utra		China	16	19	17	16	16	17	16	19	17
288	03_78E_017	NRSC		CH_609	5253	GL	27° 52' 35.76"	89° 17' 45.96"	Brahmap-utra		China	65	46	54	54	54	48	46	54	51
289	03_78E_018	NRSC			5164	GL	27° 52' 45.12"	89° 19' 28.2"	Brahmap-utra		China	24	20	20	18	16	19	16	20	19
290	03_78E_019	NRSC		CH_611	5022	GL	27° 52' 40.44"	89° 18' 43.2"	Brahmap-utra		China	60	61	62	61	60	60	60	62	61
291	03_78E_023	NRSC		CH_612	5291	GL	27° 51' 17.64"	89° 15' 59.76"	Brahmap-utra		China	38	55	56	60	56	64	55	64	58
292	03_78E_026	NRSC		CH_613	5161	GL	27° 48' 31.32"	89° 13' 37.2"	Brahmap-utra	Amo Chhu	China	36	58	55	61	54	58	54	61	57
293	03_82C_011	NRSC			5242	GL	29° 45' 0.72"	92° 46' 40.8"	Brahmap-utra		China	12	14	14	14	15	14	14	15	14
294	03_82F_001	NRSC			4822	GL	30° 52' 59.16"	93° 49' 51.24"	Brahmap-utra		China	17	14	14	15	15	15	14	15	15
295	03_82F_005	NRSC			4762	GL	30° 32' 6.36"	93° 31' 2.28"	Brahmap-utra		China	17	43	49	44	44	42	42	49	44
296	03_82F_007	NRSC		CH_732	4801	GL	30° 31' 13.8"	93° 26' 41.28"	Brahmap-utra		China	115	117	#	114	125	114	114	125	118
297	03_82F_009	NRSC			4712	GL	30° 29' 36.6"	93° 21' 27.72"	Brahmap-utra		China	20	23	23	24	23	22	22	24	23

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
298	03_82F_010	NRSC		CH_735	5030	GL	30° 28' 13.08"	93° 31' 59.52"	Brahmap- utra		China	44	108	26	28	27	28	26	108	43
299	03_82F_011	NRSC			4720	GL	30° 26' 26.16"	93° 37' 45.84"	Brahmap- utra		China	12	13	15	12	14	13	12	15	13
300	03_82F_012	NRSC			4454	GL	30° 21' 27.36"	93° 37' 52.68"	Brahmap- utra		China	39	24	25	26	25	25	24	26	25
301	03_82F_013	NRSC			4761	GL	30° 21' 16.92"	93° 31' 40.08"	Brahmap- utra		China	10	#	13	13	12	12	12	13	13
302	03_82F_014	NRSC		CH_739	4691	GL	30° 20' 52.08"	93° 30' 24.12"	Brahmap- utra		China	49	46	46	45	46	45	45	46	46
303	03_82F_018	NRSC			4554	GL	30° 17' 15.72"	93° 28' 45.12"	Brahmap- utra		China	17	17	17	17	18	17	17	18	17
304	03_82F_020	NRSC		CH_745	4110	GL	30° 16' 3"	93° 27' 22.68"	Brahmap- utra		China	71	#	57	70	59	71	57	71	64
305	03_82F_021	NRSC			4487	GL	30° 14' 58.56"	93° 36' 49.32"	Brahmap- utra		China	11	11	12	12	12	11	11	12	12
306	03_82F_022	NRSC		CH_747	4200	GL	30° 14' 30.48"	93° 38' 14.28"	Brahmap- utra		China	103	113	112	115	112	112	112	115	113
307	03_82F_023	NRSC			4354	GL	30° 13' 57"	93° 34' 35.76"	Brahmap- utra		China	11	13	13	12	12	12	12	13	12
308	03_82F_024	NRSC			4197	GL	30° 13' 39.36"	93° 38' 11.04"	Brahmap- utra		China	17	22	21	21	21	18	18	22	21
309	03_82F_025	NRSC			4253	GL	30° 12' 29.52"	93° 30' 44.28"	Brahmap- utra		China	11	12	14	14	13	13	12	14	13
310	03_82F_026	NRSC			4607	GL	30° 10' 21"	93° 43' 5.52"	Brahmap- utra		China	13	13	10	14	15	13	10	15	13
311	03_82G_003	NRSC			4936	GL	29° 47' 24.36"	93° 29' 17.88"	Brahmap- utra		China	13	17	15	18	16	16	15	18	16
312	03_82G_004	NRSC			4498	GL	29° 43' 54.12"	93° 29' 52.44"	Brahmap- utra		China	38	31	32	33	34	29	29	34	32
313	03_82G_007	NRSC			4994	GL	29° 39' 28.08"	93° 16' 30"	Brahmap- utra		China	16	14	15	15	15	14	14	15	15

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
314	03_82J_001	NRSC			4775	GL	30° 49' 51.6"	94° 0' 32.4"	Brahmap- utra		China	31	35	35	36	34	34	34	36	35
315	03_82J_003	NRSC			4161	GL	30° 41' 4.2"	94° 19' 25.32"	Brahmap- utra		China	22	#	31	29	#	33	29	33	31
316	03_82J_004	NRSC		CH_834	3957	GL	30° 39' 37.8"	94° 29' 7.8"	Brahmap- utra		China	356	495	530	564	568	497	495	568	531
317	03_82J_005	NRSC		CH_835	4134	GL	30° 37' 34.68"	94° 26' 42"	Brahmap- utra		China	67	76	78	77	78	76	76	78	77
318	03_82J_006	NRSC			3657	GL	30° 32' 8.88"	94° 45' 38.16"	Brahmap- utra		China	41	60	51	52	69	60	51	69	58
319	03_82J_008	NRSC		CH_838	4036	GL	30° 27' 0.72"	94° 36' 14.76"	Brahmap- utra		China	156	205	198	212	213	212	198	213	208
320	03_82J_018	NRSC		CH_848	3913	GL	30° 6' 54.72"	94° 11' 17.16"	Brahmap- utra		China	99	97	102	94	95	93	93	102	96
321	03_82J_019	NRSC		CH_849	3944	GL	30° 5' 49.56"	94° 16' 10.92"	Brahmap- utra		China	45	81	82	86	87	95	81	95	86
322	03_82K_109	NRSC			4356	GL	29° 3' 7.2"	94° 5' 49.2"	Brahmap- utra		China	22	24	22	23	25	24	22	25	24
323	03_82L_004	NRSC			4441	GL	28° 54' 20.16"	94° 0' 14.04"	Brahmap- utra		China	13	12	13	13	13	13	12	13	13
324	03_82L_006	NRSC			4147	GL	28° 52' 48.36"	94° 2' 22.92"	Brahmap- utra		China	13	16	16	17	17	15	15	17	16
325	03_82L_008	NRSC			4342	GL	28° 52' 12.36"	94° 1' 58.8"	Brahmap- utra		China	12	10	13	12	13	11	10	13	12
326	03_82L_009	NRSC		CH_971	3893	GL	28° 51' 14.04"	94° 0' 7.2"	Brahmap- utra		China	54	70	73	74	72	61	61	74	70
327	03_82N_001	NRSC			5055	GL	30° 35' 27.96"	95° 33' 3.24"	Brahmap- utra		China	38	40	40	37	35	40	35	40	38
328	03_82N_004	NRSC		CH_975	4290	GL	30° 36' 3.96"	95° 10' 59.16"	Brahmap- utra		China	92	138	128	132	142	128	128	142	134
329	03_82N_008	NRSC			4546	GL	30° 34' 19.2"	95° 15' 15.48"	Brahmap- utra		China	18	39	37	35	35	35	35	39	36

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
330	03_82N_011	NRSC			4997	GL	30° 31' 23.52"	95° 42' 0"	Brahmap- utra		China	20	23	27	18	18	18	18	27	21
331	03_82N_015	NRSC			5090	GL	30° 32' 44.88"	95° 20' 35.52"	Brahmap- utra		China	10	7	#	7	7	7	7	7	7
332	03_82N_016	NRSC			5017	GL	30° 32' 24.36"	95° 22' 30.36"	Brahmap- utra		China	11	8	9	9	8	8	8	9	8
333	03_82N_018	NRSC			4333	GL	30° 31' 44.4"	95° 6' 23.4"	Brahmap- utra		China	11	12	11	10	8	9	8	12	10
334	03_82N_025	NRSC			4764	GL	30° 22' 51.24"	95° 39' 12.96"	Brahmap- utra		China	27	26	24	25	26	25	24	26	25
335	03_82N_029	NRSC			4492	GL	30° 16' 4.8"	95° 36' 21.6"	Brahmap- utra		China	35	46	42	42	36	40	36	46	41
336	03_82N_030	NRSC		CH_1001	4462	GL	30° 15' 2.88"	95° 36' 13.68"	Brahmap- utra		China	132	#	138	140	#	131	131	140	136
337	03_82N_031	NRSC			4409	GL	30° 14' 17.88"	95° 36' 8.28"	Brahmap- utra		China	17	16	16	16	16	17	16	17	16
338	03_82N_032	NRSC			4384	GL	30° 13' 44.4"	95° 35' 30.84"	Brahmap- utra		China	28	17	43	41	122	121	17	122	69
339	03_82N_033	NRSC		CH_1004	4357	GL	30° 13' 16.68"	95° 35' 0.24"	Brahmap- utra		China	89	89	87	90	87	86	86	90	88
340	03_82N_034	NRSC			4181	GL	30° 13' 23.52"	95° 32' 32.64"	Brahmap- utra		China	13	13	11	15	14	14	11	15	13
341	03_82N_035	NRSC			4479	GL	30° 10' 50.16"	95° 51' 20.88"	Brahmap- utra		China	23	21	20	23	19	22	19	23	21
342	03_82N_037	NRSC			4691	GL	30° 0' 30.96"	95° 54' 54.36"	Brahmap- utra		China	13	#	13	9	12	9	9	13	11
343	03_82O_001	NRSC			4348	GL	29° 59' 32.64"	95° 51' 50.4"	Brahmap- utra		China	42	45	51	48	40	46	40	51	46
344	03_82O_002	NRSC			4198	GL	29° 58' 57.36"	95° 54' 12.96"	Brahmap- utra		China	18	21	21	23	21	21	21	23	21
345	03_82O_003	NRSC			4180	GL	29° 54' 16.92"	95° 54' 31.32"	Brahmap- utra		China	15	#	15	15	#	15	15	15	15

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
346	03_82O_004	NRSC			4148	GL	29° 48' 18.72"	95° 38' 33"	Brahmap-utra		China	18	27	24	23	16	28	16	28	24
347	03_83A_001	NRSC			5018	GL	27° 58' 51.6"	92° 39' 3.96"	Brahmap-utra		China	52	52	52	46	50	44	44	52	49
348	03_91C_002	NRSC			4691	GL	29° 53' 36.96"	96° 22' 40.44"	Brahmap-utra		China	23	27	45	48	49	29	27	49	40
349	03_91C_003	NRSC			4703	GL	29° 52' 59.88"	96° 23' 21.12"	Brahmap-utra		China	24	28	31	35	31	35	28	35	32
350	03_91C_004	NRSC			4137	GL	29° 52' 26.76"	96° 19' 29.28"	Brahmap-utra		China	21	21	20	20	21	20	20	21	20
351	03_91C_005	NRSC		CH_1056	4926	GL	29° 49' 23.16"	96° 21' 2.52"	Brahmap-utra		China	86	#	104	105	#	97	97	105	102
352	03_91C_006	NRSC			5057	GL	29° 45' 11.16"	96° 27' 48.96"	Brahmap-utra		China	14	6	4	4	4	4	4	6	4
353	03_91C_007	NRSC			4817	GL	29° 45' 42.48"	96° 22' 26.76"	Brahmap-utra		China	11	11	12	10	11	11	10	12	11
354	03_91C_008	NRSC			4899	GL	29° 42' 21.6"	96° 18' 24.84"	Brahmap-utra		China	23	#	20	24	23	19	19	24	22
355	03_91C_010	NRSC			4712	GL	29° 39' 49.32"	96° 33' 8.64"	Brahmap-utra		China	23	19	21	21	22	21	19	22	21
356	03_91C_012	NRSC			4663	GL	29° 35' 18.6"	96° 40' 18.84"	Brahmap-utra		China	21	21	22	21	21	18	18	22	21
357	03_91C_013	NRSC			4925	GL	29° 33' 38.16"	96° 37' 40.44"	Brahmap-utra		China	12	9	13	12	13	13	9	13	12
358	03_91C_014	NRSC		CH_1065	4033	GL	29° 35' 56.4"	96° 8' 28.68"	Brahmap-utra		China	65	#	54	59	46	48	46	59	52
359	03_91C_015	NRSC			4421	GL	29° 34' 14.88"	96° 22' 26.04"	Brahmap-utra		China	26	21	23	25	22	23	21	25	23
360	03_91C_016	NRSC			4813	GL	29° 32' 36.6"	96° 36' 57.96"	Brahmap-utra		China	13	17	16	16	16	13	13	17	16
361	03_91C_019	NRSC			3858	GL	29° 27' 55.08"	96° 30' 4.32"	Brahmap-utra		China	17	60	66	70	72	70	60	72	68

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
362	03_91C_021	NRSC			4093	GL	29° 25' 15.96"	96° 37' 30.72"	Brahmap- utra		China	35	32	56	34	32	32	32	56	37
363	03_91C_023	NRSC			4811	GL	29° 23' 8.88"	96° 22' 22.08"	Brahmap- utra	Lohit	China	30	#	#	31	31	#	31	31	31
364	03_91C_024	NRSC		CH_1075	3977	GL	29° 17' 53.16"	96° 48' 59.04"	Brahmap- utra		China	262	340	315	300	370	313	300	370	328
365	03_91C_025	NRSC		CH_1076	4022	GL	29° 17' 40.2"	96° 50' 3.84"	Brahmap- utra		China	95	108	122	111	112	102	102	122	111
366	03_91C_033	NRSC		CH_1079	4278	GL	29° 13' 46.92"	96° 48' 4.68"	Brahmap- utra		China	164	139	156	150	138	147	138	156	146
367	03_91C_035	NRSC			4283	GL	29° 13' 20.64"	96° 48' 34.2"	Brahmap- utra		China	24	33	53	53	#	53	33	53	48
368	03_91C_036	NRSC			4298	GL	29° 13' 6.96"	96° 48' 52.2"	Brahmap- utra		China	16	#	53	53	#	53	53	53	53
369	03_91C_043	NRSC			4429	GL	29° 10' 44.04"	96° 51' 12.96"	Brahmap- utra		China	26	12	13	13	13	12	12	13	13
370	03_91C_071	NRSC			4339	GL	29° 2' 31.2"	96° 13' 12"	Brahmap- utra	Dibang	China	35	#	37	39	38	40	37	40	39
371	03_91C_074	NRSC		CH_1102	4258	GL	29° 1' 48"	96° 13' 22.8"	Brahmap- utra	Dibang	China	47	#	56	54	43	49	43	56	51
372	03_91D_070	NRSC			4126	GL	28° 36' 36.36"	96° 43' 19.56"	Brahmap- utra	Lohit	China	12	13	14	14	14	13	13	14	14
373	03_91D_082	NRSC			4550	GL	28° 32' 28.68"	96° 36' 5.04"	Brahmap- utra	Lohit	China	31	24	#	30	26	26	24	30	27
374	03_91D_096	NRSC			3794	GL	28° 25' 56.64"	96° 55' 32.52"	Brahmap- utra	Lohit	China	38	#	#	#	#	42	42	42	42
375	03_91D_098	NRSC			4197	GL	28° 24' 10.44"	96° 50' 11.76"	Brahmap- utra	Lohit	China	13	#	15	16	14	14	14	16	15
376	03_91D_099	NRSC			4406	GL	28° 23' 31.2"	96° 51' 28.44"	Brahmap- utra	Lohit	China	30	31	32	30	28	30	28	32	30
377	03_91G_001	NRSC			5147	GL	29° 42' 4.32"	97° 0' 28.8"	Brahmap- utra		China	12	14	12	13	13	11	11	14	13

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
378	03_91G_003	NRSC			5018	GL	29° 28' 1.2"	97° 22' 29.28"	Brahmap- utra	Lohit	China	15	22	18	25	24	18	18	25	21
379	03_91G_004	NRSC			5262	GL	29° 29' 48.48"	97° 6' 10.8"	Brahmap- utra	Lohit	China	21	26	28	28	28	31	26	31	28
380	03_91G_005	NRSC			5170	GL	29° 24' 7.56"	97° 0' 32.4"	Brahmap- utra	Lohit	China	14	13	11	12	13	11	11	13	12
381	03_91G_006	NRSC			5028	GL	29° 23' 30.48"	97° 1' 8.76"	Brahmap- utra	Lohit	China	27	21	22	22	22	21	21	22	22
382	03_91G_007	NRSC			4785	GL	29° 13' 47.28"	97° 19' 55.92"	Brahmap- utra	Lohit	China	11	15	14	15	13	13	13	15	14
383	03_91G_009	NRSC			4637	GL	29° 12' 2.88"	97° 22' 8.4"	Brahmap- utra	Lohit	China	16	17	20	17	17	16	16	20	17
384	03_91H_001	NRSC			4429	GL	28° 59' 30.84"	97° 32' 54.24"	Brahmap- utra	Lohit	China	13	19	20	19	19	18	18	20	19
385	03_91H_003	NRSC			4439	GL	28° 59' 22.56"	97° 16' 4.08"	Brahmap- utra	Lohit	China	10	12	15	15	13	14	12	15	14
386	03_91H_006	NRSC			4620	GL	28° 57' 28.8"	97° 20' 3.84"	Brahmap- utra	Lohit	China	17	16	16	17	17	17	16	17	17
387	03_91H_007	NRSC			4635	GL	28° 56' 52.08"	97° 19' 11.64"	Brahmap- utra	Lohit	China	27	28	29	29	28	28	28	29	28
388	03_91H_008	NRSC			4755	GL	28° 56' 41.28"	97° 18' 12.6"	Brahmap- utra	Lohit	China	40	42	42	42	44	48	42	48	44
389	03_91H_015	NRSC			4553	GL	28° 51' 10.08"	97° 37' 50.88"	Brahmap- utra	Lohit	China	14	13	39	14	13	12	12	39	18
390	03_91H_033	NRSC			4389	GL	28° 33' 21.96"	97° 32' 51.72"	Brahmap- utra	Lohit	China	13	14	11	13	14	12	11	14	13
391	03_91H_034	NRSC			4629	GL	28° 32' 13.2"	97° 37' 15.6"	Brahmap- utra	Lohit	China	13	15	16	16	14	14	14	16	15
392	03_91H_036	NRSC			4457	GL	28° 31' 5.16"	97° 31' 35.76"	Brahmap- utra	Lohit	China	19	23	21	24	22	25	21	25	23
393	01_52L_008	NRSC		CH_1	3873	WB	32° 19' 35.04"	78° 43' 25.68"	Brahmap- utra	Sutlej	China	50	#	148	#	#	#	148	148	148
394	01_52N_001	NRSC		CH_3	4964	WB	34° 9' 32.04"	79° 46' 45.84"	Indus	Indus	China	1156 4	12468	12570	12149	12372	12360	12149	12570	12384

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
395	01_52O_001	NRSC		CH_4	4242	WB	33° 45' 0"	79° 14' 24"	Indus	Shyok	China	65825	70453	71280	70450	69865	69759	69759	71280	70361
396	01_52O_002	NRSC		CH_5	5262	WB	33° 58' 49.08"	79° 32' 35.52"	Indus	Indus	China	135	87	100	105	98	94	87	105	97
397	01_52O_003	NRSC		CH_6	4252	WB	33° 33' 43.56"	79° 57' 46.8"	Indus	Indus	China	290	198	209	204	206	220	198	220	207
398	01_52O_005	NRSC		CH_8	4358	WB	33° 23' 25.08"	79° 22' 1.2"	Indus	Indus	China	780	770	803	825	809	800	770	825	801
399	01_61B_003	NRSC		CH_28	5074	WB	34° 14' 5.64"	80° 30' 20.88"	Indus	Indus	China	224	209	229	226	230	225	209	230	224
400	01_61C_001	NRSC		CH_29	4526	WB	33° 57' 12.6"	80° 54' 12.96"	Indus	Indus	China	11154	12012	11816	11730	11823	11820	11730	12012	11840
401	01_61C_002	NRSC		CH_30	4494	WB	33° 45' 3.96"	80° 35' 51.72"	Indus	Indus	China	685	3099	3052	2960	3020	3021	2960	3099	3030
402	01_61C_004	NRSC			4495	WB	33° 45' 16.2"	80° 38' 37.68"			China	21	3099	3052	2960	3020	3021	2960	3099	3030
403	01_61C_005	NRSC		CH_33	4495	WB	33° 44' 54.96"	80° 38' 29.76"	Indus	Indus	China	139	3099	3052	2960	3020	3021	2960	3099	3030
404	01_61C_010	NRSC			4495	WB	33° 43' 28.92"	80° 41' 25.08"	Indus	Indus	China	88	3099	3052	2960	3020	3021	2960	3099	3030
405	01_61C_011	NRSC		CH_39	4494	WB	33° 43' 13.44"	80° 43' 16.68"	Indus	Indus	China	403	3099	3052	2960	3020	3021	2960	3099	3030
406	01_61C_012	NRSC		CH_40	4282	WB	33° 32' 45.24"	80° 9' 21.6"	Indus	Indus	China	290	324	308	288	279	282	279	324	296
407	01_61C_014	NRSC		CH_42	4279	WB	33° 29' 57.12"	80° 20' 60"	Indus	Indus	China	286	328	326	318	1120	855	318	1120	589
408	01_61C_015	NRSC		CH_43	4280	WB	33° 29' 16.44"	80° 18' 58.32"	Indus	Indus	China	742	846	859	832	1120	855	832	1120	902
409	01_61C_016	NRSC		CH_44	4289	WB	33° 25' 58.44"	80° 27' 59.76"	Indus	Indus	China	344	351	346	351	376	348	346	376	354
410	01_61C_018	NRSC		CH_46	4291	WB	33° 22' 1.2"	80° 33' 11.16"	Indus	Indus	China	1779	2208	2116	1916	1925	1770	1770	2208	1987
411	01_61C_021	NRSC		CH_49	4349	WB	33° 6' 16.56"	80° 17' 10.32"	Indus	Indus	China	1155	1010	1055	1014	1073	1095	1010	1095	1049
412	01_61C_022	NRSC		CH_50	4339	WB	33° 5' 51.36"	80° 23' 34.08"	Indus	Indus	China	1420	1752	1559	1643	1605	1545	1545	1752	1621
413	01_61C_023	NRSC		CH_51	4350	WB	33° 5' 57.48"	80° 10' 38.64"	Indus	Indus	China	623	641	643	667	697	676	641	697	665
414	01_61C_024	NRSC		CH_52	4323	WB	33° 2' 6.72"	80° 34' 51.96"	Indus	Indus	China	4486	5295	5075	5204	5340	4973	4973	5340	5177
415	01_61D_001	NRSC		CH_53	5593	WB	32° 48' 5.4"	80° 29' 0.96"	Indus	Indus	China	63	#	#	#	#	#	#	#	#
416	01_61D_002	NRSC		CH_54	4313	WB	32° 32' 12.12"	80° 13' 42.96"	Indus	Indus	China	1216	1344	1465	1449	1540	1725	1344	1725	1505
417	01_61D_003	NRSC		CH_55	4453	WB	32° 25' 23.52"	80° 51' 55.08"	Indus	Indus	China	69	50	46	53	54	62	46	62	53
418	01_61D_004	NRSC		CH_56	4991	WB	32° 9' 24.84"	80° 18' 11.88"	Indus	Indus	China	550	586	544	502	541	536	502	586	542

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
419	01_61F_002	NRSC		CH_59	5279	WB	34° 17' 55.32"	81° 12' 5.4"	Indus	Indus	China	59	48	52	61	57	54	48	61	54
420	01_61F_003	NRSC		CH_60	5256	WB	34° 16' 30.36"	81° 3' 7.56"	Indus	Indus	China	570	546	568	578	575	565	546	578	566
421	01_61F_004	NRSC		CH_61	4814	WB	34° 1' 19.92"	81° 36' 47.88"	Indus	Indus	China	3639 2	43578	41600	41226	42546	42091	41226	43578	42208
422	01_61G_001	NRSC		CH_62	4973	WB	33° 49' 12.72"	81° 38' 40.56"	Indus	Indus	China	85	#	#	#	#	#	#	#	#
423	01_61G_002	NRSC		CH_63	4663	WB	33° 40' 21.72"	81° 22' 16.32"	Indus	Indus	China	1134	1448	1392	1386	1390	1388	1386	1448	1401
424	01_61G_003	NRSC		CH_64	4864	WB	33° 37' 59.88"	81° 23' 14.64"	Indus	Indus	China	85	85	78	#	87	88	78	88	85
425	01_61H_001	NRSC		CH_66	4619	WB	32° 7' 7.68"	81° 16' 9.84"	Indus	Indus	China	282	#	14	356	321	321	14	356	253
426	01_62A_003	NRSC		CH_69	5142	WB	31° 34' 40.08"	80° 59' 22.2"	Indus	Indus	China	1355	1350	1358	1423	1405	1425	1350	1425	1392
427	01_62B_001	NRSC		CH_73	4526	WB	30° 49' 22.8"	80° 44' 34.8"	Indus	Sutlej	China	440	246	249	305	303	270	246	305	275
428	01_62E_002	NRSC		CH_77	5139	WB	31° 36' 58.32"	81° 1' 48"	Indus	Indus	China	161	152	153	1537	165	175	152	1537	436
429	01_62E_003	NRSC		CH_78	5104	WB	31° 27' 30.24"	81° 5' 26.52"	Indus	Indus	China	136	153	153	163	168	151	151	168	158
430	01_62E_004	NRSC		CH_79	5161	WB	31° 21' 24.48"	81° 8' 59.28"	Indus	Indus	China	233	248	251	259	256	258	248	259	254
431	01_62E_005	NRSC		CH_80	5174	WB	31° 18' 47.88"	81° 31' 1.56"	Indus	Indus	China	189	186	213	200	213	205	186	213	203
432	01_62E_006	NRSC		CH_81	5055	WB	31° 17' 31.2"	81° 14' 40.92"	Indus	Indus	China	524	543	559	541	538	537	537	559	544
433	01_62E_010	NRSC		CH_85	5233	WB	31° 16' 26.76"	81° 35' 41.64"	Indus	Indus	China	156	165	157	166	168	168	157	168	165
434	01_62E_013	NRSC		CH_88	5345	WB	31° 14' 29.4"	81° 41' 9.96"	Indus	Indus	China	166	164	176	158	174	174	158	176	169
435	01_62E_015	NRSC		CH_90	5415	WB	31° 10' 56.28"	81° 11' 40.2"	Indus	Sutlej	China	51	53	54	50	53	52	50	54	52
436	01_62F_001	NRSC		CH_92	4571	WB	30° 41' 19.68"	81° 13' 55.2"	Indus	Sutlej	China	2548 6	25204	27842	24494	25210	25307	24494	27842	25611
437	01_62F_002	NRSC		CH_93	4592	WB	30° 48' 6.48"	81° 33' 54.72"	Indus	Sutlej	China	333	294	315	296	293	297	293	315	299
438	01_62F_003	NRSC		CH_94	4586	WB	30° 41' 5.28"	81° 28' 12.36"	Indus	Sutlej	China	4055 2	41361	41583	42256	41549	42240	41361	42256	41798
439	01_62F_004	NRSC		CH_95	5493	WB	30° 25' 50.88"	81° 25' 58.44"	Indus	Sutlej	China	196	190	202	197	200	195	190	202	197
440	01_62J_001	NRSC		CH_102	4784	WB	30° 38' 15.72"	82° 8' 6.36"	Indus	Sutlej	China	5571	5653	5775	5825	5990	5737	5653	5990	5796
441	02_62B_001	NRSC		CH_106	5216	WB	30° 37' 4.8"	80° 37' 49.44"	Ganga	Karnali	China	67	27	31	27	29	28	27	31	28
442	02_71H_001	NRSC		CH_121	4580	WB	28° 53' 32.28"	85° 35' 8.52"	Ganga	Arun Kosi	China	2682 5	27140	27183	27956	27450	27051	27051	27956	27356

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
443	02_71H_002	NRSC		CH_122	4650	WB	28° 43' 24.96"	85° 52' 46.56"	Ganga	Arun Kosi	China	2152	2564	1500	2512	2524	2592	1500	2592	2338
444	02_71H_003	NRSC		CH_123	4649	WB	28° 41' 10.32"	85° 57' 15.12"	Ganga	Arun Kosi	China	166	233	217	218	211	219	211	233	220
445	02_71H_028	NRSC	15G	CH_148	5174	WB	28° 19' 49.08"	85° 52' 7.32"	Ganga	Sun Kosi	China	200	189	202	210	191	201	189	210	199
446	02_71H_035	NRSC		CH_155	4366	WB	28° 10' 57"	85° 55' 22.44"	Ganga	Sun Kosi	China	45	51	44	44	46	46	44	51	46
447	02_71L_001	NRSC		CH_156	5106	WB	28° 53' 12.84"	86° 30' 52.2"	Ganga	Arun Kosi	China	83	88	95	104	98	101	88	104	97
448	02_71L_002	NRSC		CH_157	5261	WB	28° 51' 29.16"	86° 31' 12.36"	Ganga	Arun Kosi	China	72	81	79	86	85	82	79	86	83
449	02_71L_003	NRSC		CH_158	5324	WB	28° 49' 55.92"	86° 31' 21"	Ganga	Arun Kosi	China	258	277	276	280	280	288	276	288	280
450	02_71P_015	NRSC		CH_203	4153	WB	28° 34' 35.76"	87° 32' 38.76"	Ganga	Arun Kosi	China	838	1042	1160	1185	1052	1139	1042	1185	1116
451	02_71P_016	NRSC		CH_204	4182	WB	28° 29' 56.76"	87° 27' 7.92"	Ganga	Arun Kosi	China	137	163	160	#	125	134	125	163	146
452	02_71P_018	NRSC		CH_206	4199	WB	28° 21' 27.72"	87° 53' 6.72"	Ganga	Arun Kosi	China	51	#	303	305	210	225	210	305	261
453	02_71P_025	NRSC		CH_213	4807	WB	28° 12' 51.12"	87° 28' 5.88"	Ganga	Arun Kosi	China	104	148	176	165	182	167	148	182	168
454	02_71P_035	NRSC		CH_223	5146	WB	28° 9' 7.2"	87° 9' 27"	Ganga	Arun Kosi	China	107	89	90	96	100	101	89	101	95
455	02_71P_040	NRSC	126G	CH_228	4962	WB	28° 6' 50.04"	87° 39' 19.08"	Ganga	Arun Kosi	China	126	153	138	152	149	150	138	153	148
456	02_77D_001	NRSC		CH_256	4423	WB	28° 24' 16.2"	88° 13' 42.96"	Ganga	Arun Kosi	China	5831	1975	2307	2982	2869	3244	1975	3244	2675
457	02_77D_003	NRSC		CH_258	4364	WB	28° 18' 33.12"	88° 19' 31.08"	Ganga	Arun Kosi	China	119	61	86	91	80	46	46	91	73
458	02_77D_004	NRSC		CH_259	4378	WB	28° 17' 38.04"	88° 7' 15.6"	Ganga	Arun Kosi	China	1875	#	#	670	425	501	425	670	532
459	03_62J_001	NRSC		CH_273	5449	WB	30° 52' 49.8"	82° 51' 33.12"	Brahmap- utra		China	147	146	145	151	152	149	145	152	149
460	03_62J_011	NRSC		CH_283	5181	WB	30° 28' 6.6"	82° 3' 33.12"	Brahmap- utra		China	401	335	386	421	408	402	335	421	390
461	03_62J_012	NRSC		CH_284	4883	WB	30° 25' 53.4"	82° 21' 42.12"	Brahmap- utra		China	165	165	173	170	163	157	157	173	166
462	03_62J_013	NRSC		CH_285	4934	WB	30° 25' 8.04"	82° 18' 7.92"	Brahmap- utra		China	854	951	976	959	934	909	909	976	946
463	03_62J_015	NRSC		CH_287	5207	WB	30° 23' 52.08"	82° 11' 32.28"	Brahmap- utra		China	70	77	91	86	85	85	77	91	85

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
464	03_62K_001	NRSC		CH_305	4834	WB	29° 59' 8.16"	82° 32' 4.56"	Brahmap- utra		China	370	401	394	395	390	407	390	407	397
465	03_62K_002	NRSC		CH_306	4858	WB	29° 58' 48.36"	82° 35' 17.16"	Brahmap- utra		China	45	55	56	49	49	48	48	56	51
466	03_62N_001	NRSC		CH_318	5102	WB	30° 53' 20.04"	83° 34' 48.72"	Brahmap- utra		China	1430 0	14742	15086	15392	14820	14805	14742	15392	14969
467	03_62N_003	NRSC		CH_320	5208	WB	30° 42' 38.16"	83° 36' 30.96"	Brahmap- utra		China	57	#	#	3	4	3	3	4	3
468	03_62N_004	NRSC		CH_321	5168	WB	30° 40' 5.16"	83° 37' 30.72"	Brahmap- utra		China	878	765	865	852	870	879	765	879	846
469	03_62N_009	NRSC		CH_326	5241	WB	30° 35' 26.88"	83° 31' 7.32"	Brahmap- utra		China	288	180	194	198	248	281	180	281	220
470	03_62N_017	NRSC		CH_334	5454	WB	30° 27' 55.44"	83° 59' 4.2"	Brahmap- utra		China	77	76	88	82	82	82	76	88	82
471	03_62N_021	NRSC		CH_338	5432	WB	30° 25' 50.88"	83° 59' 48.84"	Brahmap- utra		China	197	120	220	202	202	201	120	220	189
472	03_62N_022	NRSC		CH_339	4599	WB	30° 12' 15.12"	83° 14' 31.92"	Brahmap- utra		China	198	186	169	181	192	183	169	192	182
473	03_62O_002	NRSC		CH_347	4587	WB	29° 57' 38.52"	83° 16' 11.64"	Brahmap- utra		China	58	#	0	30	41	42	0	42	28
474	03_62O_024	NRSC		CH_369	4637	WB	29° 51' 26.64"	83° 15' 5.76"	Brahmap- utra		China	721	789	825	827	884	826	789	884	830
475	03_62O_027	NRSC		CH_372	4575	WB	29° 48' 47.16"	83° 39' 15.48"	Brahmap- utra		China	47	#	42	40	44	48	40	48	44
476	03_62O_028	NRSC		CH_373	4577	WB	29° 47' 40.92"	83° 33' 20.88"	Brahmap- utra		China	887	#	449	382	367	308	308	449	377
477	03_62O_030	NRSC		CH_375	5013	WB	29° 43' 34.68"	83° 6' 16.56"	Brahmap- utra		China	97	105	#	120	96	107	96	120	107
478	03_62O_032	NRSC		CH_377	5012	WB	29° 41' 21.48"	83° 11' 24.36"	Brahmap- utra		China	49	59	61	61	61	59	59	61	60
479	03_62O_038	NRSC		CH_383	4893	WB	29° 36' 16.92"	83° 22' 38.28"	Brahmap- utra		China	124	133	#	142	143	133	133	143	138

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
480	03_62O_039	NRSC		CH_384	4555	WB	29° 35' 21.48"	83° 59' 19.68"	Brahmap-utra		China	236	287	302	304	305	310	287	310	302
481	03_62O_040	NRSC		CH_385	4896	WB	29° 34' 56.64"	83° 21' 20.16"	Brahmap-utra		China	107	135	304	142	286	278	135	304	229
482	03_62O_041	NRSC		CH_386	4963	WB	29° 30' 39.6"	83° 26' 39.48"	Brahmap-utra		China	206	216	295	300	294	278	216	300	277
483	03_62O_042	NRSC		CH_387	4964	WB	29° 29' 56.04"	83° 25' 40.44"	Brahmap-utra		China	57	64	294	300	294	278	64	300	246
484	03_62O_043	NRSC		CH_388	5285	WB	29° 28' 13.44"	83° 45' 49.68"	Brahmap-utra		China	86	65	64	71	75	72	64	75	69
485	03_71B_002	NRSC		CH_392	5388	WB	30° 26' 7.8"	84° 3' 33.12"	Brahmap-utra		China	8185	8070	8188	8637	8609	8440	8070	8637	8389
486	03_71C_010	NRSC		CH_403	4561	WB	29° 18' 39.6"	84° 25' 49.44"	Brahmap-utra		China	49	#	#	32	34	33	32	34	33
487	03_71C_011	NRSC		CH_404	4684	WB	29° 13' 52.32"	84° 22' 12"	Brahmap-utra		China	119	160	156	163	165	167	156	167	162
488	03_71G_001	NRSC		CH_410	5163	WB	29° 53' 34.08"	85° 14' 49.56"	Brahmap-utra		China	720	750	794	803	847	760	750	847	791
489	03_71G_006	NRSC		CH_415	5065	WB	29° 39' 11.52"	85° 44' 15.72"	Brahmap-utra		China	956	970	1009	995	996	1002	970	1009	994
490	03_71G_007	NRSC		CH_416	5153	WB	29° 39' 14.4"	85° 48' 31.68"	Brahmap-utra		China	191	200	202	204	206	201	200	206	203
491	03_71G_008	NRSC		CH_417	5187	WB	29° 33' 30.96"	85° 52' 50.52"	Brahmap-utra		China	60	53	54	54	58	58	53	58	55
492	03_71G_009	NRSC		CH_418	5032	WB	29° 31' 32.88"	85° 38' 37.32"	Brahmap-utra		China	178	92	103	128	125	119	92	128	113
493	03_71G_010	NRSC		CH_419	4491	WB	29° 20' 49.2"	85° 4' 58.8"	Brahmap-utra		China	304	175	291	206	271	230	175	291	235
494	03_71G_011	NRSC		CH_420	4619	WB	29° 7' 19.56"	85° 23' 54.6"	Brahmap-utra		China	951	1050	1284	1498	1494	1370	1050	1498	1339
495	03_71G_013	NRSC		CH_422	4543	WB	29° 6' 7.56"	85° 5' 49.56"	Brahmap-utra		China	244	230	238	240	220	247	220	247	235

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
496	03_71G_014	NRSC		CH_423	4606	WB	29° 5' 16.8"	85° 11' 22.56"	Brahmap- utra		China	60	160	156	178	176	163	156	178	167
497	03_71K_002	NRSC		CH_425	4974	WB	29° 48' 4.32"	86° 56' 44.16"	Brahmap- utra		China	2248	2309	2307	2316	2319	2321	2307	2321	2314
498	03_71K_003	NRSC		CH_426	4982	WB	29° 45' 59.04"	86° 55' 21.36"	Brahmap- utra		China	72	84	84	91	88	86	84	91	87
499	03_71K_006	NRSC		CH_429	4847	WB	29° 37' 30.36"	86° 14' 50.28"	Brahmap- utra		China	2096	1941	2223	2222	2218	2150	1941	2223	2151
500	03_71K_007	NRSC		CH_430	4752	WB	29° 34' 46.2"	86° 15' 39.6"	Brahmap- utra		China	99	102	715	680	560	480	102	715	507
501	03_71K_009	NRSC		CH_432	4750	WB	29° 33' 26.28"	86° 15' 58.68"	Brahmap- utra		China	230	246	715	680	560	480	246	715	536
502	03_71K_011	NRSC		CH_434	4761	WB	29° 28' 32.88"	86° 13' 50.88"	Brahmap- utra		China	387	322	594	629	912	585	322	912	608
503	03_71O_002	NRSC		CH_438	4909	WB	29° 42' 16.92"	87° 1' 8.4"	Brahmap- utra		China	48	18	20	23	25	21	18	25	21
504	03_71O_006	NRSC		CH_442	4738	WB	29° 33' 21.6"	87° 1' 39"	Brahmap- utra		China	104	123	112	127	123	133	112	133	124
505	03_71O_009	NRSC		CH_445	4302	WB	29° 18' 31.68"	87° 11' 22.2"	Brahmap- utra		China	2123	2139	2144	2146	2173	2171	2139	2173	2155
506	03_71O_010	NRSC		CH_446	4296	WB	29° 12' 14.4"	87° 23' 29.04"	Brahmap- utra		China	813	855	1047	1052	988	863	855	1052	961
507	03_71P_001	NRSC		CH_448	5302	WB	28° 49' 56.64"	87° 33' 36"	Brahmap- utra		China	112	133	144	142	149	144	133	149	142
508	03_77B_001	NRSC		CH_452	5039	WB	30° 10' 5.52"	88° 37' 10.92"	Brahmap- utra		China	52	53	52	51	50	52	50	53	52
509	03_77B_002	NRSC		CH_453	5019	WB	30° 8' 51.72"	88° 37' 36.12"	Brahmap- utra		China	227	217	216	216	214	211	211	217	215
510	03_77C_006	NRSC		CH_460	4514	WB	29° 35' 15"	88° 13' 54.12"	Brahmap- utra		China	102	102	80	88	85	85	80	102	88
511	03_77H_001	NRSC		CH_476	4275	WB	28° 49' 46.92"	89° 51' 6.48"	Brahmap- utra		China	442	252	472	435	436	378	252	472	395

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
512	03_77H_003	NRSC		CH_478	4714	WB	28° 24' 1.8"	89° 3' 41.04"	Brahmap- utra		China	220	280	194	275	236	284	194	284	254
513	03_77H_004	NRSC		CH_479	4428	WB	28° 19' 37.56"	89° 25' 43.68"	Brahmap- utra		China	201	150	174	184	203	195	150	203	181
514	03_77H_007	NRSC		CH_481	4424	WB	28° 16' 25.68"	89° 20' 44.52"	Brahmap- utra		China	866	#	544	998	1064	1058	544	1064	916
515	03_77H_008	NRSC		CH_482	4570	WB	28° 13' 37.92"	89° 38' 17.52"	Brahmap- utra		China	1268	1254	1277	1280	1279	1269	1254	1280	1272
516	03_77H_018	NRSC		CH_488	4699	WB	28° 10' 50.52"	89° 32' 3.84"	Brahmap- utra		China	80	102	98	96	98	96	96	102	98
517	03_77H_020	NRSC		CH_490	4473	WB	28° 8' 59.64"	89° 20' 58.92"	Brahmap- utra		China	4588	#	4808	4796	4647	4875	4647	4875	4782
518	03_77H_023	NRSC		CH_492	5313	WB	28° 8' 14.64"	89° 32' 5.28"	Brahmap- utra		China	47	52	52	50	50	48	48	52	50
519	03_77H_030	NRSC		CH_495	4802	WB	28° 1' 32.16"	89° 25' 37.56"	Brahmap- utra		China	66	58	68	66	74	68	58	74	67
520	03_77J_003	NRSC		CH_499	5039	WB	30° 28' 45.48"	90° 57' 58.32"	Brahmap- utra		China	89	82	89	90	91	88	82	91	88
521	03_77K_009	NRSC		CH_511	3937	WB	29° 28' 1.2"	90° 10' 20.28"	Brahmap- utra		China	70	54	59	57	55	53	53	59	56
522	03_77K_015	NRSC		CH_517	4455	WB	29° 7' 33.6"	90° 20' 9.24"	Brahmap- utra		China	108	119	122	138	124	122	119	138	125
523	03_77K_017	NRSC		CH_519	4448	WB	29° 0' 39.6"	90° 26' 50.28"	Brahmap- utra		China	3853	3670	3936	3869	3869	3862	3670	3936	3841
524	03_77L_001	NRSC		CH_520	4443	WB	28° 57' 20.52"	90° 42' 39.6"	Brahmap- utra		China	5543 5	57142	55045	56654	56630	56644	55045	57142	56423
525	03_77L_003	NRSC		CH_521	4434	WB	28° 56' 57.48"	90° 31' 1.2"	Brahmap- utra		China	4065	3770	3758	3794	4061	3816	3758	4061	3840
526	03_77L_006	NRSC		CH_522	4533	WB	28° 53' 40.2"	90° 24' 19.44"	Brahmap- utra		China	44	26	39	42	38	55	26	55	40
527	03_77L_007	NRSC		CH_523	4510	WB	28° 49' 27.12"	90° 50' 0.24"	Brahmap- utra		China	1478	1170	1280	1340	1296	1293	1170	1340	1276

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
528	03_77L_008	NRSC		CH_524	4448	WB	28° 49' 31.8"	90° 41' 11.04"	Brahmap- utra		China	71	56	80	81	79	85	56	85	76
529	03_77L_009	NRSC		CH_525	4515	WB	28° 47' 21.12"	90° 53' 38.76"	Brahmap- utra		China	522	234	626	659	660	560	234	660	548
530	03_77L_010	NRSC		CH_526	4457	WB	28° 48' 40.68"	90° 29' 34.44"	Brahmap- utra		China	47	50	51	53	15	44	15	53	43
531	03_77L_011	NRSC		CH_527	4533	WB	28° 45' 34.92"	90° 50' 49.2"	Brahmap- utra		China	1209	1207	1221	1302	1292	1305	1207	1305	1265
532	03_77L_012	NRSC		CH_528	5014	WB	28° 33' 58.68"	90° 23' 47.04"	Brahmap- utra		China	2877 1	29861	29496	30288	30288	30290	29496	30290	30045
533	03_77L_013	NRSC		CH_529	5191	WB	28° 26' 56.04"	90° 15' 24.84"	Brahmap- utra		China	319	350	342	343	346	356	342	356	347
534	03_77L_014	NRSC		CH_530	5289	WB	28° 26' 19.32"	90° 10' 24.96"	Brahmap- utra		China	48	50	41	45	47	46	41	50	46
535	03_77L_017	NRSC		CH_533	5340	WB	28° 23' 8.52"	90° 19' 9.12"	Brahmap- utra		China	74	81	84	93	90	90	81	93	88
536	03_77L_027	NRSC		CH_543	4531	WB	28° 16' 25.68"	90° 44' 12.48"	Brahmap- utra	Kuri Chhu	China	163	175	204	197	196	180	175	204	190
537	03_77N_004	NRSC		CH_563	3890	WB	30° 0' 32.4"	91° 51' 39.24"	Brahmap- utra		China	1296	1346	1230	1065	1396	1311	1065	1396	1270
538	03_77O_001	NRSC		CH_564	3879	WB	29° 55' 7.68"	91° 5' 22.2"	Brahmap- utra		China	181	104	180	179	181	180	104	181	165
539	03_77O_002	NRSC		CH_565	3806	WB	29° 53' 58.56"	91° 10' 0.12"	Brahmap- utra		China	91	95	36	70	82	88	36	95	74
540	03_77P_004	NRSC		CH_575	4452	WB	28° 48' 36"	91° 8' 42.72"	Brahmap- utra		China	143	206	198	201	200	210	198	210	203
541	03_77P_005	NRSC		CH_576	4619	WB	28° 45' 55.08"	91° 40' 30"	Brahmap- utra		China	112	221	#	#	#	#	221	221	221
542	03_77P_006	NRSC		CH_577	4616	WB	28° 39' 46.44"	91° 40' 46.56"	Brahmap- utra		China	4566	2229	3840	2590	2524	2472	2229	3840	2731
543	03_77P_009	NRSC		CH_580	5086	WB	28° 32' 46.68"	91° 31' 31.8"	Brahmap- utra		China	94	108	109	145	112	105	105	145	116

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
544	03_77P_012	NRSC		CH_583	4975	WB	28° 31' 43.32"	91° 39' 54.36"	Brahmap-utra		China	91	48	61	52	52	57	48	61	54
545	03_77P_013	NRSC		CH_584	5155	WB	28° 31' 48.36"	91° 33' 42.84"	Brahmap-utra		China	60	49	44	47	49	54	44	54	49
546	03_77P_016	NRSC		CH_587	4749	WB	28° 19' 48.72"	91° 57' 47.88"	Brahmap-utra	Dangme Chhu	China	251	151	165	163	162	150	150	165	158
547	03_77P_017	NRSC		CH_588	4751	WB	28° 17' 49.92"	91° 56' 44.52"	Brahmap-utra	Dangme Chhu	China	2345	2327	2327	2349	2359	2326	2326	2359	2338
548	03_77P_018	NRSC		CH_589	4707	WB	28° 6' 57.6"	91° 56' 34.44"	Brahmap-utra	Dangme Chhu	China	154	116	124	116	112	117	112	124	117
549	03_77P_019	NRSC		CH_590	4637	WB	28° 3' 31.68"	91° 56' 22.92"	Brahmap-utra	Dangme Chhu	China	220	298	289	286	283	270	270	298	285
550	03_77P_020	NRSC		CH_591	4649	WB	28° 5' 16.44"	91° 15' 25.92"	Brahmap-utra	Kuri Chhu	China	63	62	59	51	63	64	51	64	60
551	03_77P_023	NRSC		CH_593	4235	WB	28° 1' 55.56"	91° 0' 6.12"	Brahmap-utra	Kuri Chhu	China	45	68	77	72	79	81	68	81	75
552	03_78A_018	NRSC		CH_598	4880	WB	27° 51' 19.44"	88° 56' 41.28"	Brahmap-utra	Amo Chhu	China	67	62	51	51	53	54	51	62	54
553	03_78E_006	NRSC		CH_604	4572	WB	27° 58' 11.64"	89° 22' 41.52"	Brahmap-utra		China	67	67	69	63	63	62	62	69	65
554	03_78E_009	NRSC		CH_605	4580	WB	27° 57' 37.08"	89° 23' 47.04"	Brahmap-utra		China	175	174	174	207	187	180	174	207	184
555	03_78E_010	NRSC		CH_606	4582	WB	27° 57' 48.96"	89° 24' 45.72"	Brahmap-utra		China	49	46	46	47	187	180	46	187	101
556	03_78E_012	NRSC		CH_607	4576	WB	27° 56' 32.64"	89° 23' 16.44"	Brahmap-utra		China	279	274	274	285	290	278	274	290	280
557	03_78M_003	NRSC		CH_614	4459	WB	27° 54' 3.96"	91° 53' 48.84"	Brahmap-utra	Dangme Chhu	China	207	215	216	215	220	218	215	220	217
558	03_78M_016	NRSC		CH_617	4647	WB	27° 50' 30.84"	91° 53' 34.44"	Brahmap-utra	Dangme Chhu	China	142	145	144	146	151	154	144	154	148
559	03_82A_002	NRSC		CH_621	4905	WB	31° 7' 12.36"	92° 49' 59.52"	Brahmap-utra		China	319	403	386	413	399	396	386	413	399

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560	03_82A_003	NRSC		CH_622	4896	WB	31° 6' 33.12"	92° 57' 7.2"	Brahmap-utra		China	99	89	95	95	100	90	89	100	94
561	03_82A_004	NRSC		CH_623	5008	WB	31° 6' 0.9"	92° 41' 55.68"	Brahmap-utra		China	46	50	48	51	49	51	48	51	50
562	03_82A_007	NRSC		CH_626	4911	WB	31° 2' 10.32"	92° 47' 12.84"	Brahmap-utra		China	85	93	100	91	98	136	91	136	104
563	03_82B_002	NRSC		CH_628	4906	WB	30° 58' 33.24"	92° 56' 28.68"	Brahmap-utra		China	405	450	462	448	452	450	448	462	452
564	03_82B_004	NRSC		CH_630	4893	WB	30° 56' 56.04"	92° 53' 22.56"	Brahmap-utra		China	93	98	106	104	104	105	98	106	103
565	03_82B_005	NRSC		CH_631	4888	WB	30° 56' 4.56"	92° 49' 45.12"	Brahmap-utra		China	195	213	234	221	221	232	213	234	224
566	03_82B_006	NRSC		CH_632	4837	WB	30° 56' 1.68"	92° 46' 27.84"	Brahmap-utra		China	124	121	129	113	122	120	113	129	121
567	03_82B_007	NRSC		CH_633	4964	WB	30° 53' 40.92"	92° 57' 2.52"	Brahmap-utra		China	199	208	209	214	207	215	207	215	211
568	03_82B_008	NRSC		CH_634	4928	WB	30° 53' 45.96"	92° 54' 35.28"	Brahmap-utra		China	254	294	282	269	268	274	268	294	277
569	03_82B_009	NRSC		CH_635	4963	WB	30° 54' 21.96"	92° 49' 1.56"	Brahmap-utra		China	156	181	182	166	177	177	166	182	177
570	03_82B_010	NRSC		CH_636	4990	WB	30° 52' 42.24"	92° 52' 50.16"	Brahmap-utra		China	52	54	54	52	51	54	51	54	53
571	03_82B_014	NRSC		CH_640	4825	WB	30° 29' 36.96"	92° 38' 35.88"	Brahmap-utra		China	157	188	172	152	166	138	138	188	163
572	03_82B_015	NRSC		CH_641	5124	WB	30° 20' 56.4"	92° 44' 7.08"	Brahmap-utra		China	75	88	87	85	87	89	85	89	87
573	03_82B_020	NRSC		CH_646	4986	WB	30° 12' 59.04"	92° 30' 59.76"	Brahmap-utra		China	49	47	48	49	52	53	47	53	50
574	03_82B_021	NRSC		CH_647	5041	WB	30° 12' 46.08"	92° 34' 15.96"	Brahmap-utra		China	63	57	58	54	58	60	54	60	57
575	03_82B_028	NRSC		CH_654	4998	WB	30° 2' 58.2"	92° 26' 35.52"	Brahmap-utra		China	48	51	53	51	51	52	51	53	52

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
576	03_82C_010	NRSC		CH_665	4921	WB	29° 46' 44.04"	92° 23' 17.16"	Brahmap-utra		China	153	159	160	151	156	158	151	160	157
577	03_82C_016	NRSC		CH_671	4679	WB	29° 39' 59.76"	92° 23' 36.6"	Brahmap-utra		China	54	56	52	46	49	54	46	56	51
578	03_82D_003	NRSC		CH_709	4408	WB	28° 53' 37.32"	92° 7' 43.32"	Brahmap-utra		China	50	41	38	38	39	37	37	41	39
579	03_82D_004	NRSC		CH_710	4481	WB	28° 52' 54.84"	92° 9' 54"	Brahmap-utra		China	390	366	390	360	378	366	360	390	372
580	03_82D_010	NRSC		CH_716	5043	WB	28° 11' 29.4"	92° 2' 34.8"	Brahmap-utra	Dangme Chhu	China	76	22	23	25	24	25	22	25	24
581	03_82E_002	NRSC		CH_720	5008	WB	31° 7' 53.4"	93° 10' 36.48"	Brahmap-utra		China	659	741	745	680	686	712	680	745	713
582	03_82E_003	NRSC		CH_721	5027	WB	31° 6' 12.96"	93° 8' 36.6"	Brahmap-utra		China	98	96	97	100	97	101	96	101	98
583	03_82E_004	NRSC		CH_722	5049	WB	31° 3' 52.92"	93° 17' 32.64"	Brahmap-utra		China	57	43	50	44	45	47	43	50	46
584	03_82E_007	NRSC		CH_725	5043	WB	31° 0' 14.4"	93° 5' 16.08"	Brahmap-utra		China	71	76	73	71	66	70	66	76	71
585	03_82F_004	NRSC		CH_729	4508	WB	30° 37' 16.32"	93° 10' 49.8"	Brahmap-utra		China	692	711	707	713	714	711	707	714	711
586	03_82F_008	NRSC		CH_733	4828	WB	30° 32' 5.64"	93° 3' 29.16"	Brahmap-utra		China	83	96	88	90	83	92	83	96	90
587	03_82F_016	NRSC		CH_741	4632	WB	30° 19' 7.68"	93° 20' 32.64"	Brahmap-utra		China	49	50	50	53	52	48	48	53	51
588	03_82F_030	NRSC		CH_755	3485	WB	30° 1' 13.8"	93° 58' 5.16"	Brahmap-utra		China	2675	2713	2720	2686	2684	2651	2651	2720	2691
589	03_82G_009	NRSC		CH_770	4580	WB	29° 37' 46.2"	93° 33' 41.4"	Brahmap-utra		China	51	48	44	44	44	43	43	48	45
590	03_82G_017	NRSC		CH_778	4437	WB	29° 32' 32.28"	93° 49' 49.44"	Brahmap-utra		China	53	50	55	58	58	61	50	61	56
591	03_82G_019	NRSC		CH_780	4460	WB	29° 30' 9"	93° 56' 12.12"	Brahmap-utra		China	59	60	60	61	59	60	59	61	60

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
592	03_82G_023	NRSC		CH_784	4377	WB	29° 30' 45"	93° 37' 11.64"	Brahmap- utra		China	84	94	87	76	85	90	76	94	86
593	03_82G_024	NRSC		CH_785	4647	WB	29° 32' 25.8"	93° 20' 42"	Brahmap- utra		China	95	94	102	94	102	95	94	102	97
594	03_82G_035	NRSC		CH_796	4386	WB	29° 28' 35.4"	93° 37' 53.04"	Brahmap- utra		China	81	84	84	82	86	80	80	86	83
595	03_82G_045	NRSC		CH_806	4523	WB	29° 24' 19.44"	93° 42' 28.44"	Brahmap- utra		China	71	81	78	69	75	76	69	81	76
596	03_82G_048	NRSC		CH_809	4663	WB	29° 25' 15.6"	93° 17' 27.6"	Brahmap- utra		China	55	40	42	42	43	43	40	43	42
597	03_82G_050	NRSC		CH_811	4734	WB	29° 22' 57.36"	93° 38' 25.08"	Brahmap- utra		China	44	41	44	44	42	42	41	44	43
598	03_82G_051	NRSC		CH_812	4735	WB	29° 22' 10.92"	93° 41' 38.04"	Brahmap- utra		China	49	46	46	46	50	49	46	50	47
599	03_82G_055	NRSC		CH_816	4619	WB	29° 19' 55.92"	93° 43' 17.04"	Brahmap- utra		China	62	48	49	50	51	50	48	51	50
600	03_82G_060	NRSC		CH_821	4577	WB	29° 17' 13.92"	93° 44' 10.68"	Brahmap- utra		China	59	50	59	61	60	64	50	64	59
601	03_82G_062	NRSC		CH_823	4925	WB	29° 14' 25.08"	93° 16' 33.6"	Brahmap- utra		China	58	61	58	59	59	58	58	61	59
602	03_82G_065	NRSC		CH_826	4148	WB	29° 2' 16.8"	93° 50' 8.52"	Brahmap- utra		China	47	#	78	70	72	49	49	78	67
603	03_82J_014	NRSC		CH_844	3703	WB	30° 10' 24.6"	94° 20' 44.52"	Brahmap- utra		China	183	203	194	166	#	197	166	203	190
604	03_82J_017	NRSC		CH_847	3829	WB	30° 7' 33.24"	94° 5' 24"	Brahmap- utra		China	282	283	277	277	277	#	277	283	279
605	03_82J_020	NRSC		CH_850	3852	WB	30° 3' 1080"	94° 14' 53.52"	Brahmap- utra		China	439	461	433	431	420	430	420	461	435
606	03_82J_023	NRSC		CH_853	4315	WB	30° 2' 45.96"	94° 9' 24.84"	Brahmap- utra		China	105	#	127	109	115	109	109	127	115
607	03_82J_024	NRSC		CH_854	4362	WB	30° 0' 46.44"	94° 28' 17.76"	Brahmap- utra		China	67	61	68	69	72	68	61	72	68

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
608	03_82J_025	NRSC		CH_855	4038	WB	30° 0' 17.64"	94° 23' 1.68"	Brahmap-utra		China	59	63	52	55	62	61	52	63	59
609	03_82K_002	NRSC		CH_858	3998	WB	29° 59' 14.64"	94° 26' 7.44"	Brahmap-utra		China	75	73	74	70	75	74	70	75	73
610	03_82K_006	NRSC		CH_862	4523	WB	29° 56' 25.8"	94° 35' 18.24"	Brahmap-utra		China	52	44	48	50	48	50	44	50	48
611	03_82K_007	NRSC		CH_863	4294	WB	29° 57' 31.68"	94° 17' 30.48"	Brahmap-utra		China	130	131	137	137	131	100	100	137	127
612	03_82K_009	NRSC		CH_865	4168	WB	29° 56' 48.84"	94° 21' 28.44"	Brahmap-utra		China	116	112	112	117	114	103	103	117	112
613	03_82K_017	NRSC		CH_873	4397	WB	29° 55' 0.48"	94° 16' 46.56"	Brahmap-utra		China	151	178	185	183	177	185	177	185	182
614	03_82K_018	NRSC		CH_874	4168	WB	29° 53' 25.44"	94° 34' 12"	Brahmap-utra		China	165	164	170	149	153	154	149	170	158
615	03_82K_020	NRSC		CH_876	4364	WB	29° 53' 47.76"	94° 27' 41.4"	Brahmap-utra		China	77	96	85	78	80	87	78	96	85
616	03_82K_036	NRSC		CH_892	4251	WB	29° 49' 46.56"	94° 37' 55.2"	Brahmap-utra		China	69	60	67	67	70	69	60	70	67
617	03_82K_037	NRSC		CH_893	4147	WB	29° 49' 40.08"	94° 27' 43.2"	Brahmap-utra		China	55	62	55	54	54	54	54	62	56
618	03_82K_039	NRSC		CH_895	4128	WB	29° 48' 45.72"	94° 25' 57"	Brahmap-utra		China	224	188	196	188	218	233	188	233	205
619	03_82K_040	NRSC		CH_896	4329	WB	29° 48' 28.44"	94° 30' 1.8"	Brahmap-utra		China	66	57	59	60	56	58	56	60	58
620	03_82K_042	NRSC		CH_898	4364	WB	29° 46' 44.76"	94° 36' 2.88"	Brahmap-utra		China	205	188	202	204	198	199	188	204	198
621	03_82K_045	NRSC		CH_901	4572	WB	29° 49' 0.12"	94° 7' 58.8"	Brahmap-utra		China	49	49	51	51	51	54	49	54	51
622	03_82K_049	NRSC		CH_905	4180	WB	29° 46' 31.8"	94° 34' 20.64"	Brahmap-utra		China	50	42	46	48	46	48	42	48	46
623	03_82K_060	NRSC		CH_916	4316	WB	29° 32' 43.44"	94° 57' 53.64"	Brahmap-utra		China	93	74	90	86	80	91	74	91	84

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
624	03_82K_068	NRSC		CH_924	4320	WB	29° 32' 40.92"	94° 4' 48"	Brahmap- utra		China	52	49	50	52	51	54	49	54	51
625	03_82K_074	NRSC		CH_930	4553	WB	29° 31' 33.96"	94° 3' 26.28"	Brahmap- utra		China	88	73	73	76	85	76	73	85	77
626	03_82K_075	NRSC		CH_931	4511	WB	29° 31' 3.36"	94° 7' 14.88"	Brahmap- utra		China	118	119	112	121	124	119	112	124	119
627	03_82K_077	NRSC		CH_933	4590	WB	29° 30' 16.2"	94° 7' 58.44"	Brahmap- utra		China	100	100	103	106	99	103	99	106	102
628	03_82K_080	NRSC		CH_936	4530	WB	29° 28' 21.72"	94° 14' 10.68"	Brahmap- utra		China	47	52	55	51	51	#	51	55	52
629	03_82K_103	NRSC		CH_959	3964	WB	29° 17' 42.36"	94° 12' 6.12"	Brahmap- utra		China	50	40	40	41	43	42	40	43	41
630	03_82N_019	NRSC		CH_990	4877	WB	30° 28' 24.6"	95° 34' 30.36"	Brahmap- utra		China	55	57	59	58	56	57	56	59	57
631	03_82O_016	NRSC		CH_1023	4374	WB	29° 22' 19.56"	95° 52' 18.48"	Brahmap- utra	Dihang	China	91	#	105	106	105	#	105	106	105
632	03_82O_029	NRSC		CH_1032	3345	WB	29° 18' 17.64"	95° 38' 20.4"	Brahmap- utra	Dihang	China	68	70	67	71	62	71	62	71	68
633	03_82O_044	NRSC		CH_1037	3552	WB	29° 10' 46.92"	95° 29' 6.72"	Brahmap- utra	Dihang	China	92	79	89	93	95	94	79	95	90
634	03_82O_047	NRSC		CH_1039	3574	WB	29° 9' 46.08"	95° 29' 27.6"	Brahmap- utra	Dihang	China	44	46	58	61	52	#	46	61	54
635	03_82O_054	NRSC		CH_1046	3311	WB	29° 7' 41.88"	95° 26' 17.88"	Brahmap- utra	Dibang	China	51	54	52	55	55	54	52	55	54
636	03_91C_029	NRSC		CH_1078	4229	WB	29° 14' 15.72"	96° 49' 25.32"	Brahmap- utra		China	216	214	220	213	214	211	211	220	214
637	03_91C_052	NRSC		CH_1085	4591	WB	29° 10' 28.2"	96° 19' 32.16"	Brahmap- utra	Lohit	China	64	#	#	#	#	#	#	#	#
638	03_91C_059	NRSC		CH_1089	4303	WB	29° 5' 30.12"	96° 12' 39.24"	Brahmap- utra	Dibang	China	98	#	116	100	#	#	100	116	108
639	03_91C_070	NRSC		CH_1098	4252	WB	29° 2' 37.32"	96° 11' 36.6"	Brahmap- utra	Dibang	China	57	#	58	60	52	54	52	60	56

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
640	03_91C_078	NRSC		CH_1106	3694	WB	29° 0' 30.24"	96° 13' 4.44"	Brahmap- utra	Dibang	China	48	46	49	51	47	50	46	51	49
641	03_91D_080	NRSC		CH_1135	4295	WB	28° 32' 29.76"	96° 37' 3.36"	Brahmap- utra	Lohit	China	45	37	40	42	43	44	37	44	41
642	03_91D_081	NRSC		CH_1136	3356	WB	28° 30' 58.32"	96° 41' 54.24"	Brahmap- utra	Lohit	China	304	246	303	382	318	325	246	382	315
643	03_91H_005	NRSC		CH_1170	4123	WB	28° 58' 40.08"	97° 12' 50.76"	Brahmap- utra	Lohit	China	58	65	65	66	61	64	61	66	64
644	03_91H_010	NRSC		CH_1175	4433	WB	28° 56' 23.28"	97° 15' 41.04"	Brahmap- utra	Lohit	China	79	99	101	102	96	90	90	102	98
645	03_91H_011	NRSC		CH_1176	4494	WB	28° 56' 43.44"	97° 5' 53.16"	Brahmap- utra	Lohit	China	50	52	60	62	58	56	52	62	58
646	03_91H_017	NRSC		CH_1182	4590	WB	28° 52' 37.2"	97° 21' 19.44"	Brahmap- utra	Lohit	China	46	45	43	47	48	46	43	48	46
647	03_91H_025	NRSC		CH_1190	3741	WB	28° 46' 58.8"	97° 9' 6.84"	Brahmap- utra	Lohit	China	85	#	61	86	96	83	61	96	82
648	03_91H_029	NRSC		CH_1194	3325	WB	28° 45' 44.28"	97° 3' 24.12"	Brahmap- utra	Lohit	China	50	37	44	43	45	47	37	47	43
649	03_91H_040	NRSC		CH_1205	4324	WB	28° 24' 44.28"	97° 27' 52.56"	Brahmap- utra	Lohit	China	51	54	53	55	58	56	53	58	55
650	02_71P_054	NRSC		CH_242	4859		28° 12' 36"	87° 5' 60"	Ganga	Arun Kosi	China	-	104	104	105	106	104	104	106	105
651	02_62J_002	NRSC			5021	GL	30° 8' 56.04"	82° 9' 42.12"	Ganga	Karnali	Nepal	16	17	17	17	17	15	15	17	17
652	02_62K_006	NRSC	70G		5053	GL	29° 49' 18.48"	82° 42' 41.4"	Ganga	Karnali	Nepal	18	20	20	20	19	19	19	20	20
653	02_62O_002	NRSC	410G		5495	GL	29° 12' 3.24"	83° 41' 2.76"	Ganga	Kali Gandak	Nepal	25	22	23	22	22	23	22	23	22
654	02_72I_001	NRSC	198G		5333	GL	27° 59' 55.32"	86° 50' 8.16"	Ganga	Sun Kosi	Nepal	12	11	13	9	11	11	9	13	11
655	02_72I_009	NRSC			5292	GL	27° 55' 2.64"	86° 27' 59.04"	Ganga	Sun Kosi	Nepal	11	18	#	#	17	#	17	18	18
656	02_72M_008	NRSC	376G		4722	GL	27° 52' 48.72"	87° 48' 17.28"	Ganga	Tamor Kosi	Nepal	43	37	38	37	36	37	36	38	37
657	02_72M_012	NRSC	69G		4932	GL	27° 48' 57.6"	87° 44' 56.04"	Ganga	Tamor Kosi	Nepal	18	16	14	16	17	17	14	17	16
658	02_62F_006	NRSC			5444	GL	30° 20' 46.68"	81° 51' 38.88"	Ganga	Karnali	Nepal	17	15	15	15	16	15	15	16	15

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659	02_62F_007	NRSC			5179	GL	30° 20' 18.96"	81° 54' 39.96"	Ganga	Karnali	Nepal	25	20	27	29	27	27	20	29	26
660	02_62F_008	NRSC			5620	GL	30° 19' 24.24"	81° 49' 56.28"	Ganga	Karnali	Nepal	15	11	12	12	12	12	11	12	12
661	02_62F_010	NRSC			5502	GL	30° 18' 25.56"	81° 51' 55.44"	Ganga	Karnali	Nepal	11	11	10	11	10	11	10	11	11
662	02_62F_016	NRSC	591G		5359	GL	30° 13' 0.48"	81° 48' 5.04"	Ganga	Karnali	Nepal	29	11	16	17	17	16	11	17	15
663	02_62G_002	NRSC	599G		4822	GL	29° 55' 17.76"	81° 1' 50.52"	Ganga	Karnali	Nepal	16	17	18	19	18	18	17	19	18
664	02_62G_003	NRSC	589G		3603	GL	29° 53' 50.64"	81° 34' 43.68"	Ganga	Karnali	Nepal	17	32	34	34	34	33	32	34	33
665	02_62J_001	NRSC			5182	GL	30° 11' 46.68"	82° 7' 55.2"	Ganga	Karnali	Nepal	11	7	10	10	8	5	5	10	8
666	02_62K_001	NRSC	329G		4404	GL	29° 59' 35.88"	82° 11' 49.2"	Ganga	Karnali	Nepal	26	26	30	30	28	25	25	30	28
667	02_62K_003	NRSC	546G		4571	GL	29° 55' 50.16"	82° 12' 22.68"	Ganga	Karnali	Nepal	43	43	43	38	45	43	38	45	42
668	02_62K_011	NRSC	612G		4673	GL	29° 14' 57.12"	82° 33' 49.68"	Ganga	Bheri	Nepal	26	28	28	27	30	29	27	30	28
669	02_62O_004	NRSC	299G		5529	GL	29° 7' 19.2"	83° 44' 18.6"	Ganga	Kali Gandak	Nepal	11	23	27	28	21	13	13	28	22
670	02_62O_005	NRSC	609G		5450	GL	29° 2' 46.32"	83° 40' 27.48"	Ganga	Kali Gandak	Nepal	15	11	16	13	10	10	10	16	12
671	02_62P_001	NRSC	258G		4472	GL	28° 47' 17.52"	83° 19' 51.24"	Ganga	Bheri	Nepal	52	45	42	43	44	42	42	45	43
672	02_62P_003	NRSC	4G	NP_36	4937	GL	28° 41' 31.92"	83° 51' 9"	Ganga	Trishuli	Nepal	315	341	340	355	370	355	340	370	352
673	02_71D_001	NRSC			4111	GL	28° 39' 46.44"	84° 28' 17.76"	Ganga	Trishuli	Nepal	20	23	25	21	23	24	21	25	23
674	02_71D_002	NRSC			4063	GL	28° 39' 24.48"	84° 27' 28.8"	Ganga	Trishuli	Nepal	10	4	5	7	8	10	4	10	7
675	02_71D_003	NRSC	67G		3668	GL	28° 35' 46.68"	84° 37' 39.72"	Ganga	Trishuli	Nepal	32	27	26	24	24	25	24	27	25
676	02_71D_004	NRSC	16G	NP_45	4064	GL	28° 29' 19.68"	84° 29' 8.52"	Ganga	Trishuli	Nepal	74	104	121	104	103	103	103	121	107
677	02_71H_034	NRSC	320G		4745	GL	28° 17' 32.28"	85° 10' 12.72"	Ganga	Trishuli	Nepal	21	17	18	18	18	21	17	21	18
678	02_71H_036	NRSC	195G		5024	GL	28° 9' 50.76"	85° 37' 49.08"	Ganga	Trishuli	Nepal	15	13	14	13	14	13	13	14	13
679	02_71L_033	NRSC	408G		5369	GL	28° 2' 18.96"	86° 42' 34.56"	Ganga	Sun Kosi	Nepal	17	14	16	16	16	16	14	16	16
680	02_71L_035	NRSC	657G		5091	GL	28° 1' 22.8"	86° 43' 14.16"	Ganga	Sun Kosi	Nepal	19	15	20	23	18	19	15	23	19
681	02_72I_002	NRSC	645G	NP_58	4854	GL	27° 58' 30.72"	86° 40' 52.32"	Ganga	Sun Kosi	Nepal	68	56	49	55	54	58	49	58	54
682	02_72I_003	NRSC	319G	NP_59	4762	GL	27° 57' 3.6"	86° 41' 22.92"	Ganga	Sun Kosi	Nepal	45	40	45	44	43	44	40	45	43

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
683	02_72I_005	NRSC	483G		4715	GL	27° 56' 35.88"	86° 42' 40.68"	Ganga	Sun Kosi	Nepal	19	#	#	#	#	#	#	#	#
684	02_72I_006	NRSC			4741	GL	27° 56' 32.28"	86° 41' 55.32"	Ganga	Sun Kosi	Nepal	16	17	19	18	18	17	17	19	18
685	02_72I_007	NRSC	785G	NP_62	4540	GL	27° 55' 25.32"	86° 47' 11.76"	Ganga	Sun Kosi	Nepal	48	46	57	58	60	59	46	60	56
686	02_72I_010	NRSC	263G		5125	GL	27° 54' 57.96"	86° 28' 39"	Ganga	Sun Kosi	Nepal	14	14	14	14	15	14	14	15	14
687	02_72I_011	NRSC	1G	NP_64	5034	GL	27° 53' 58.2"	86° 55' 15.96"	Ganga	Sun Kosi	Nepal	107	173	189	183	184	186	173	189	183
688	02_72I_012	NRSC	113G		4409	GL	27° 52' 27.84"	86° 35' 10.68"	Ganga	Sun Kosi	Nepal	40	43	40	40	41	39	39	43	41
689	02_72I_013	NRSC	694G		5497	GL	27° 51' 24.84"	86° 56' 13.56"	Ganga	Sun Kosi	Nepal	18	20	23	21	22	22	20	23	22
690	02_72I_014	NRSC	6G	NP_67	4574	GL	27° 51' 41.04"	86° 28' 35.04"	Ganga	Sun Kosi	Nepal	134	168	162	149	168	168	149	168	163
691	02_72I_015	NRSC	814G		5416	GL	27° 51' 0"	86° 55' 42.96"	Ganga	Sun Kosi	Nepal	36	44	54	52	48	44	44	54	48
692	02_72I_016	NRSC	739G		5231	GL	27° 50' 18.6"	86° 56' 7.8"	Ganga	Sun Kosi	Nepal	30	28	30	33	30	30	28	33	30
693	02_72I_017	NRSC	49G		5018	GL	27° 50' 45.96"	86° 27' 49.32"	Ganga	Sun Kosi	Nepal	14	7	11	11	13	11	7	13	11
694	02_72I_018	NRSC	776G		5370	GL	27° 49' 57.72"	86° 55' 1.92"	Ganga	Sun Kosi	Nepal	31	33	32	33	29	31	29	33	32
695	02_72I_019	NRSC	757G		5510	GL	27° 48' 20.16"	86° 58' 24.96"	Ganga	Sun Kosi	Nepal	17	17	16	17	18	17	16	18	17
696	02_72I_020	NRSC	763G		5436	GL	27° 47' 56.04"	86° 57' 56.52"	Ganga	Sun Kosi	Nepal	29	20	20	20	20	20	20	20	20
697	02_72I_021	NRSC	764G		5276	GL	27° 47' 38.04"	86° 54' 38.52"	Ganga	Sun Kosi	Nepal	18	20	18	22	21	18	18	22	20
698	02_72I_022	NRSC	287G		5344	GL	27° 47' 33"	86° 50' 21.12"	Ganga	Sun Kosi	Nepal	16	34	32	32	34	36	32	36	34
699	02_72I_023	NRSC	227G	NP_76	5232	GL	27° 46' 59.16"	86° 57' 24.84"	Ganga	Sun Kosi	Nepal	81	84	90	89	96	88	84	96	89
700	02_72I_024	NRSC	358G		5165	GL	27° 47' 23.28"	86° 37' 11.64"	Ganga	Sun Kosi	Nepal	35	31	52	35	38	39	31	52	39
701	02_72I_025	NRSC	66G	NP_78	4884	GL	27° 46' 44.4"	86° 36' 48.96"	Ganga	Sun Kosi	Nepal	108	144	#	150	172	149	144	172	154
702	02_72I_026	NRSC	112G		5188	GL	27° 46' 39.72"	86° 38' 31.92"	Ganga	Sun Kosi	Nepal	30	20	31	30	30	30	20	31	28
703	02_72I_027	NRSC	41G	NP_80	4977	GL	27° 45' 17.28"	86° 57' 28.8"	Ganga	Sun Kosi	Nepal	82	89	89	89	90	89	89	90	89
704	02_72I_028	NRSC	146G		4408	GL	27° 44' 33.36"	86° 50' 39.48"	Ganga	Sun Kosi	Nepal	21	25	25	#	25	25	25	25	25
705	02_72I_030	NRSC	480G		4624	GL	27° 42' 41.04"	86° 35' 56.76"	Ganga	Sun Kosi	Nepal	11	11	15	14	12	11	11	15	13
706	02_72I_031	NRSC	14G		4777	GL	27° 41' 15"	86° 51' 29.52"	Ganga	Sun Kosi	Nepal	32	32	33	32	31	31	31	33	32

Sl. No.	Lake ID	Agency	Rank of Vulnerability	UID	Elevation	Lake type	Latitude(N)	Longitude(E)	Basin	River	Country	Inventory 2011 (Ha)	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Minimum Area 2024 (Ha)	Maximum Area 2024 (Ha)	Average Area 2024 (Ha)
707	02_72M_009	NRSC	51G	NP_86	4932	GL	27° 52' 13.08"	87° 52' 3.36"	Ganga	Tamor Kosi	Nepal	65	68	#	70	67	67	67	70	68
708	02_72M_011	NRSC	86G		4865	GL	27° 50' 39.48"	87° 4' 50.88"	Ganga	Arun Kosi	Nepal	38	#	42	44	44	42	42	44	43
709	02_72M_013	NRSC	518G		5233	GL	27° 49' 44.76"	87° 5' 41.64"	Ganga	Arun Kosi	Nepal	12	12	11	11	12	12	11	12	12
710	02_72M_014	NRSC	47G		5217	GL	27° 47' 44.16"	87° 58' 27.48"	Ganga	Tamor Kosi	Nepal	21	23	26	23	23	22	22	26	23
711	02_72M_015	NRSC	115G		4969	GL	27° 47' 34.08"	87° 56' 1.32"	Ganga	Tamor Kosi	Nepal	13	13	13	13	14	13	13	14	13
712	02_72M_016	NRSC	7G	NP_92	4572	GL	27° 47' 54.6"	87° 5' 33.36"	Ganga	Arun Kosi	Nepal	161	214	250	233	246	123	123	250	213
713	02_78A_007	NRSC	429G		5618	GL	27° 50' 11.4"	88° 4' 39.36"	Ganga	Tamor Kosi	Nepal	16	15	16	15	17	16	15	17	16
714	02_78A_008	NRSC	199G		5032	GL	27° 32' 44.88"	88° 2' 57.84"	Ganga	Tamor Kosi	Nepal	28	26	26	27	28	26	26	28	27
715	02_62F_019	NRSC	144G	NP_12	5039	WB	30° 7' 46.56"	81° 46' 44.76"	Ganga	Karnali	Nepal	58	#	74	74	72	68	68	74	72
716	02_62J_003	NRSC	254G	NP_19	4854	WB	30° 4' 40.8"	82° 7' 35.04"	Ganga	Karnali	Nepal	49	50	59	64	62	61	50	64	59
717	02_62K_010	NRSC		NP_28	2975	WB	29° 31' 50.16"	82° 5' 29.04"	Ganga	Karnali	Nepal	1051	1056	1052	1092	1069	1074	1052	1092	1069
718	02_62K_012	NRSC		NP_30	3653	WB	29° 11' 47.76"	82° 56' 54.6"	Ganga	Bheri	Nepal	469	472	476	478	479	470	470	479	475
719	02_62P_004	NRSC		NP_37	807	WB	28° 13' 1.2"	83° 56' 43.8"	Ganga	Trishuli	Nepal	406	365	386	389	380	385	365	389	381
720	02_63M_002	NRSC		NP_41	112	WB	27° 37' 15.96"	83° 6' 6.12"	Ganga	Rapti	Nepal	153	#	#	#	#	91	91	91	91
721	02_71D_007	NRSC		NP_48	700	WB	28° 10' 31.8"	84° 5' 57.84"	Ganga	Trishuli	Nepal	300	285	285	276	290	288	276	290	285
722	02_71D_008	NRSC		NP_49	639	WB	28° 9' 13.68"	84° 6' 43.56"	Ganga	Trishuli	Nepal	98	105	105	90	86	98	86	105	97
723	02_72E_001	NRSC		NP_57	1554	WB	27° 36' 6.48"	85° 9' 25.2"	Ganga	Bagmati	Nepal	158	171	#	170	192	197	170	197	183

Note: G stands for Ganga, I for Indus and B for Brahmaputra under the rank of vulnerability, # indicates frozen/ dried lakes

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