

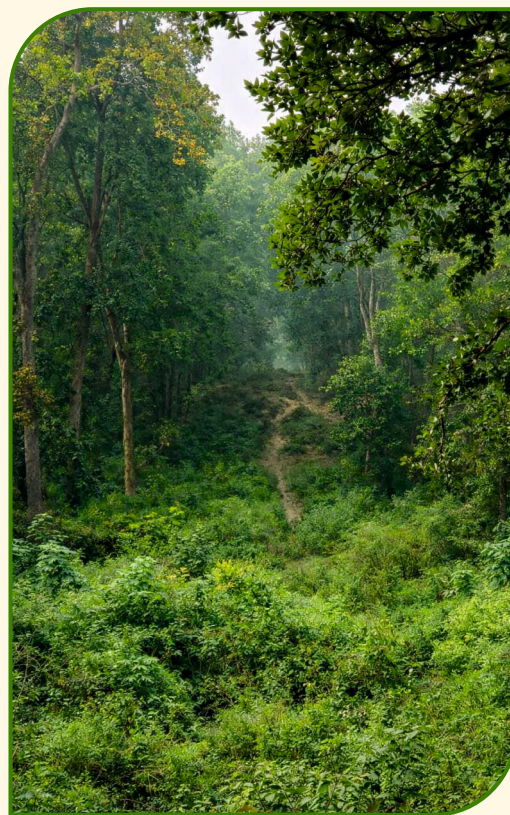
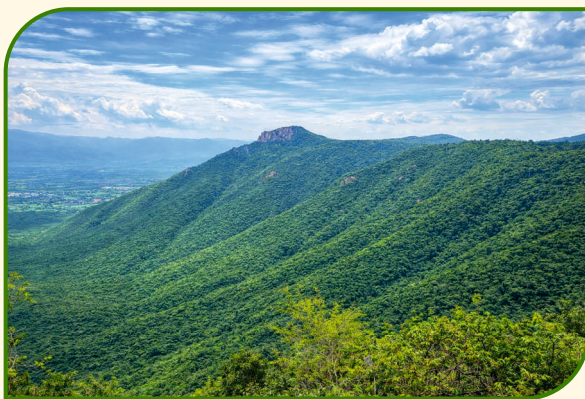


सत्यमेव जयते

TECHNICAL INFORMATION SERIES

Volume 3 No. 3 2026

Forest Fire Risk Zonation of India 2023-24



भारतीय वन सर्वेक्षण

Forest Survey of India

Ministry of Environment, Forest & Climate Change

Government of India Dehradun-248195

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ABBREVIATIONS & ACRONYMS

DEM	-	Digital Elevation Model
FC	-	Forest Cover
FFRZ	-	Forest Fire Risk Zonation
FTM	-	Forest Type Map
GIS	-	Geographical Information System
GT	-	Ground Truth
GW	-	Green Wash
LLRM	-	Log-linear Modeling Regression
MDF	-	Moderate Dense Forest
NDMA-		National Disaster Management Authority
NDRF	-	National Disaster Recovery Force
NF	-	Non-Forest
OF	-	Open Forest
RF	-	Reserved Forest
RFA	-	Recorded Forest Area
SDMA-		State Disaster Management Authority
SOI	-	Survey of India
UT	-	Union Territory
VDF	-	Very Dense Forest

GLOSSARY

Biomass	Biomass is the organic material that comes from plants or animal. Biomass can be above- ground, or below-ground, as defined above.
Biotic influences	Any influence of living organisms. Usually restricted to the influence of animals including man. Usually in forests, the biotic influences could include grazing, browsing, man-made fire, pollarding, illicit felling, and lopping.
Correlation	The correlation between two variables is the degree of association between two variables. This degree of association is expressed by a single value called a correlation coefficient (r), which can take values ranging between -1 and +1.
Crop composition	It refers to the type of species or group of species, which are contained in a forest. According to crop composition, forest can be either pure or mixed.
Emission	The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. (UNFCCC Article 1.4) (Source - 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories – Glossary)
Forest Area	The area recorded as a forest in the Government records. It is also referred to as “Recorded Forest Area”.
Forest Cover	All lands, more than or equal to one hectare in area, with a tree canopy of more than or equal to 10%, irrespective of ownership and legal status; and includes orchards, bamboo, and palm
Geographic Information System	A computer based system for capturing, storing, manipulating, analyzing and displaying data, which are spatially referenced to the earth.
Green wash area	The extent of wooded areas generally shown in light green color on the Survey of India topographic sheets.
Habitat	A physical portion of the environment that is inhabited by an organism or population of organisms. A habitat is characterized by a relative uniformity of the physical environment and fairly close interaction of all the biological species involved.
Landscape	An area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values
Physiographic Zone	A physiographic zone constitutes geographical areas that exhibit broad similarities in factors responsible for the growth of tree vegetation. Physiographic zones have been used as strata for assessing tree cover in the country.

Recorded Forest Area	Area recorded as forest in Government records.
Remote Sensing	Remote sensing is the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance. (Source: www.usgs.gov/faqs)
Spatial Resolution	The minimum area on earth's surface that can be captured by a satellite sensor as being separate from its surroundings and is represented by a "pixel".
Spectral Resolution	It refers to the width and number of spectral bands. The range of wavelengths that a satellite imaging system can detect. The narrower the bands, the greater the number of spectral resolution.
Thematic Maps	A thematic map is a map created to display information about a topic or theme

Chapter 1

Forest Fire Risk Zonation

1.1. Introduction

Forest fires have increasingly become a global concern, with their frequency and intensity escalating due to climate change, rising temperatures, prolonged dry spells, human activities and natural factors. Forest fire are inevitable and it is impossible to fully recoup the damage caused by this disaster. But to some extent it can be possible to minimize the potential risk by developing early warning strategies to provide resilience to disasters and help in rehabilitation and post disaster management¹. The intensity and number of fires can vary greatly from year to year, largely depending on the availability of dry fuel on the forest floor, long-term drought conditions, and local factors, posing significant threats to biodiversity, ecosystems, and human livelihoods. Some areas are more vulnerable to forest fires due to the presence of vulnerable forest types/vegetation, access by people to forest areas for different reasons, practices adopted by the local people, topographic and climatic gradients. Although fires are highly predictable, yet there origin is largely linked to human factors further augmented by other factors including topography, climate, accessibility and local conditions. For forest fire prevention in a holistic way, it becomes imperative that these parameters are taken into consideration for forest fire prevention by formulating a fire risk zonation model giving suitable weightage to these parameters. To focus the efforts on fire prevention and fire management, it is, therefore, necessary to identify such risk zone so that they could be given adequate importance in terms of funding, resource mobilization at strategic locations, training to forest staff, and other forms of support. A Forest Fire Risk Zonation (FFRZ) map entails the information of different risk zones for the region after taking into consideration the geospatial layer of various parameters affecting forest fires. The FFRZ map can be extremely useful for proper management and combating of forest fires. Preparedness such as allocation of resources, manpower, creation of watch towers and fire-lines in the very high and high forest fire risk areas can possibly curtail down the incidences of forest fires in these regions.

1.2. Forest Fire Risk Zone

Forest fire risk zones indicates areas where a fire outbreak can become vulnerable based on the risk zone, allowing for easy spread to other regions. A precise evaluation of forest fire issues and the formulation of effective solutions can only be satisfactory when fire risk zone mapping is

¹ Chandra S., 2005. Application of Remote Sensing and GIS Technology in Forest Fire Risk Modeling and Management of forest fires: A case study in the Garhwal Himalayan Region. Geo-information for Disaster Management, Springer,pp 1239-1254

available². Understanding the behavior of forest fires, the factors that contribute to making an environment fire-prone, and the elements that influence fire behavior are essential for effective forest fire management³.

The term “risk” describes the probability that a fire might ignite, influenced by the nature and incidence of causative agents. Evaluating forest fire risk is a critical component of fire prevention, as pre-fire planning requires objective tools to monitor when and where a fire is more likely to occur, as well as when it may have more severe consequences.

Although fire is primarily a natural phenomenon and cannot be completely controlled, mapping forest fire risk zones can help minimize the frequency of fires by suitable management interventions before fire season. The spread of a fire starting in any area of a forest can be predicted based on burning conditions. The natural landscape and the safety of nearby populations may be threatened by the spread of forest fires. Thus, preventing fire damage necessitates an early detection of the fire incident. Satellite data and Geographic Information Systems (GIS) can be effectively utilized to integrate various factors contributing to forest fires for mapping risk zones⁴.

For an effective forest fire prevention, there is a need to improve, validate, and potentially adapt tools and techniques to assess fire threats at various temporal and spatial scales. This includes considering elements such as fire behavior potential, fire risk, values at risk, and suppression capability, and how these factors fluctuate under climate change⁵.

Based on the available geospatial techniques, a GIS-based method combined with multi-criteria analysis can be used to formulate a fire risk zonation model after assigning suitable weightages to factors playing important role in the model. This approach serves as a useful tool in forest fire prevention and management, ultimately helping to minimize wildfire hazards.

² Jaiswal, R.K., Mukherjee, S., Raju, D.K., Saxena, R., 2002. Forest fire risk zone mapping from satellite imagery and GIS, *International Journal of Applied Earth Observation and Geoinformation*, 4, pp.1-10.

³ Chuvieco, E., and Congalton, R., 1989. Application of Remote Sensing and Geographic Information Systems to Forest Fire Hazard Mapping, *Remote Sensing of Environment*, 29:147-159.

⁴ Gautam, J., 2024. Forest fire risk zonation in Madi Khola watershed, Nepal. *Journal of Forest and Environmental Science*, 40(1), 24-34.

⁵ British Columbia Ministry of Forests and Range Wildfire Management Branch, 2009

1.3. Objective of the study

The main objective of this study is to identify various forest fire risk zones in the country. This involves mapping different zones based on physiographic regions and using geospatial techniques, remote sensing and field inventory data. The field variables collected as categorical data have been analyzed to identify the significant association between fire incidents (as dependent variable) and other causative factors as independent variables (e.g slope, soil types, biotic influence etc.) Categorical data analysis techniques are advantageous in an area where the statistical methodology is weak⁶. The study aims to leverage the capabilities of these technologies and propose a methodology for forest fire risk zone mapping through a Log-linear Modeling Regression (LLRM) approach. The approach used have analyzed field variables collected through Forest Inventory to identify variables having strong associations with wildfires across different physiographic zones.

The methodology involves identifying causative factors for forest fires based on statistical analysis of field data. The resultant fire risk zonation model is an outcome of logical AND relationship between variables augmented with field knowledge. The expert classifier searches for the regions meeting the required conditions and based on the intra-parametric ratings between selected variables, the forest fire risk zonation is formulated. This information is crucial for forest management and fire prevention efforts. The resulting zonation will assist officials from the Forest Department, the National Disaster Management Authority (NDMA), the National Disaster Response Force (NDRF), and the State Disaster Management Authority (SDMA) in preventing and minimizing fire risks within forests, as well as in taking appropriate actions during fire incidents.

1.3.1. Importance of Forest Fire Risk Zone Mapping

Forest Fire Risk Zone Mapping provide a foundation for research on fire behavior, contributing factors, and the effectiveness of various management practices are follows.

⁶ Wrigley, N., 1985. Categorical Data Analysis for Geographers and Environmental Scientists, Longman Group Limited.

1.3.1.1. Understanding Risks

By understanding fire risk zones, forest managers can implement preventive measures such as controlled burning in risk areas and vegetation management to reduce fuel loads and minimize the risk of severe fires. Additionally, by informing communities about these risks, residents can take proactive steps to protect their properties and prepare for potential evacuations.

1.3.1.2. Biodiversity Protection

Identified areas rich in biodiversity that are at high risk of wildfires, allowing for targeted conservation efforts to protect these critical habitats.

1.3.1.3. Ecosystem Management and Community Safety

Understanding fire risk zones is essential for preserving biodiversity and protecting critical habitats from the destructive impacts of wildfires. It aids in developing strategies that enhance ecosystem resilience to fire, ensuring that native species can recover and thrive after fire events.

1.3.1.4. Resource Management and Policy Formulation

It aids in the strategic placement of firefighting resources, ensuring that personnel and equipment are positioned where they can be most effective. Decision-makers can use risk maps to develop policies and regulations that mitigate fire risks, such as land use planning and controlled burns. Additionally, it can inform insurance companies and help communities plan economically for potential fire-related losses. This mapping allows for the evaluation of fire management strategies and the effectiveness of interventions over time.

1.4. Data Used and Methodology

In the present study, the physiographic zone-wise Forest Fire Risk Zonation mapping has been carried out. India is a land of diverse landscapes, shaped by a complex interplay of geological forces over millions of years. This diversity has led to the formation of 14 physiographic zones, each with its unique characteristics and features. These zones play a crucial role in shaping the country's climate, vegetation, and overall environment. For the analysis work, 14 physiographic zones have been clubbed into 8 physiographic zones by merging zones with near matching characteristics for reducing the size and complexity of datasets as shown in the Figure 1.1.

The plot-level field inventory data of the National Forestry Inventory has been extensively used for finding out causative factors responsible for forest fire incidences in each physiographic zones. The causative factors varied for each physiographic zone. Further geo-spatial layers of the causative factors such as Crop Composition, Altitude, Slope, Aspect, Soil Colour & Soil Texture, Biotic Influences, Grazing Incidences were generated for the purpose of analysis.

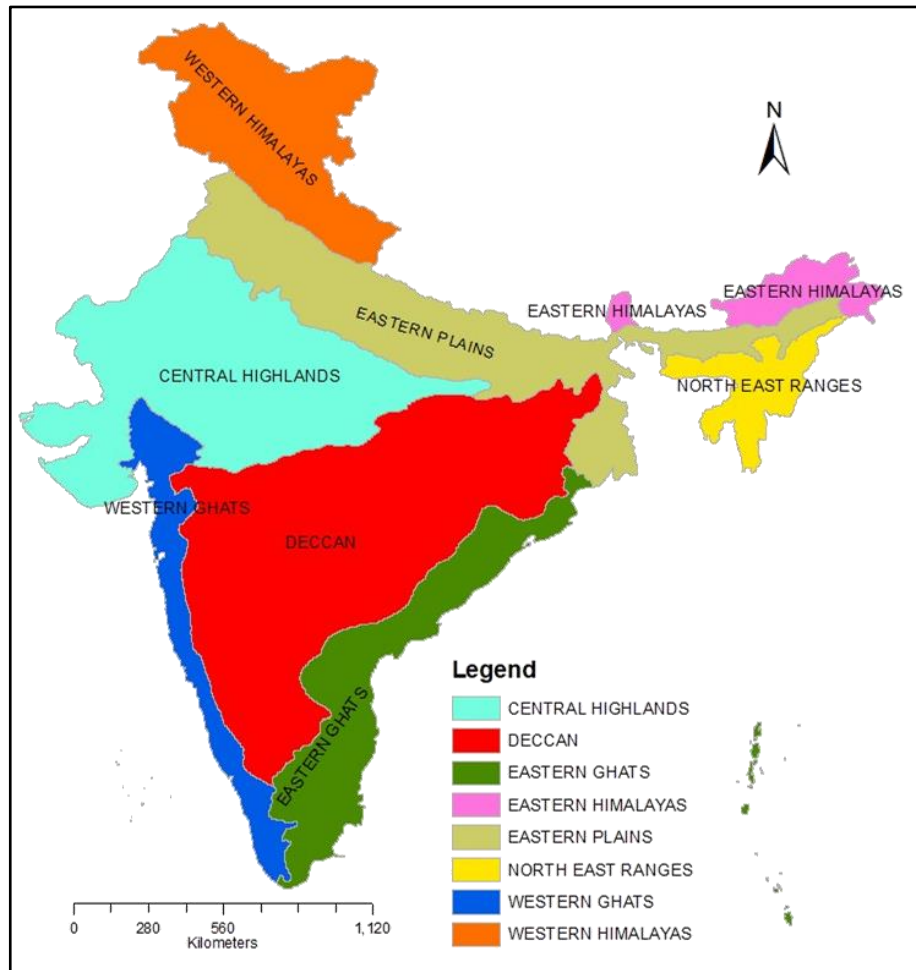


Figure 1.1 Map of clubbed physiographic zones of India

1.4.1. Identification of causative factors for forest fire

The Plot-level field inventory data has been used to identify causative factors for outbreak and spread of forest fires. The statistical method used facilitated the analysis, employing Log-Linear Regression Modeling (LLRM) to explore multi-way interactions among categorical field variables. LLRM is well-suited for analyzing categorical data where the dependent variable (forest fire incidence) exhibits varying degrees of correlation with independent variables.

Forest fire incidences served as the primary variable in the log-linear regression, with main causative factors identified as independent variables. The analysis was conducted separately for each physiographic zone. A "Good-Fit Model" approach, based on the chi-square test, was used to select the most appropriate variable associations within each zone. Crucially, a good fit is indicated by a *high* p-value ($p > 0.05$). This signifies that the observed data is consistent with the model's predictions.

Log-linear regression is a statistical technique designed to model relationships between categorical variables. Unlike traditional linear regression, which handles continuous variables, log-linear regression operates on count or frequency data organized in contingency tables. The "log" component refers to the logarithmic transformation applied to the contingency table counts. This transformation linearizes the relationships, simplifying model construction.

The analysis of field inventory data has been summarized in the following steps:

1. **Data Organization:** Data has been structured into contingency tables, with each cell representing a unique combination of categories from the variables under study.
2. **Model Formulation:** A log-linear model was constructed to describe the relationships between the variables. This model specifies how expected counts within each contingency table cell relate to the variable categories.
3. **Parameter Estimation:** Model parameters were estimated using maximum likelihood estimation, quantifying the strength and direction of associations.
4. **Model Evaluation:** The chi-squared goodness-of-fit test assessed how well the model described the observed data.
5. **Interpretation:** Model parameters were interpreted to understand the relationships between the categorical variables.

Although field inventory data based on the physiography zone was analyzed separated in a LLRM, the following variables were broadly identified for a Fire Risk Zone Model at country level. Crop Composition (Forest Types), Altitude, Aspect, Slope, Grazing incidence, Soil type, Soil color, and Biotic influence. A brief methodology for identifying causative factors of forest fire incidences and their significant associations using the LLRM approach is presented in Figure 1.2.

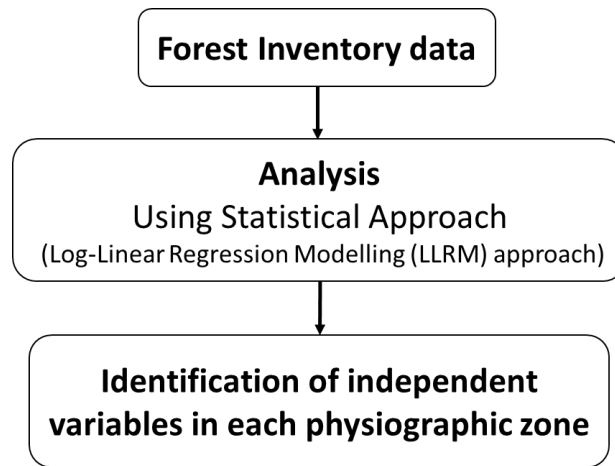


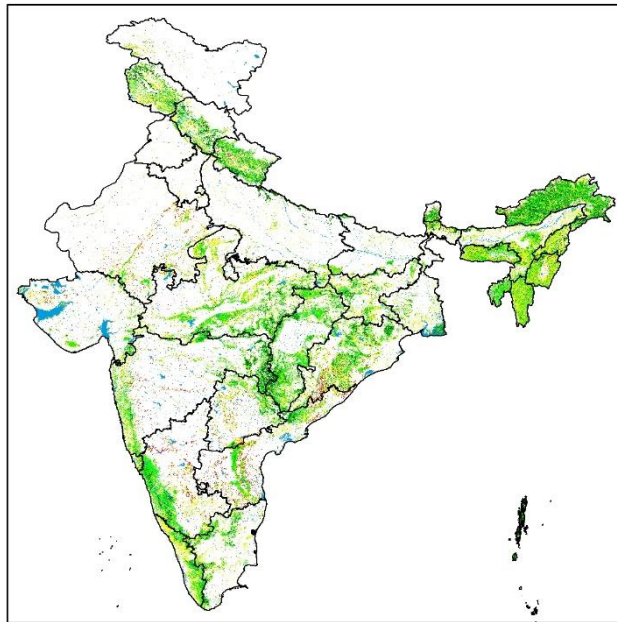
Figure 1.2 Methodology for identification of significant associations among variables with fire incidences (as dependent variable) and other factors (as independent variable) using LLRM approach

An important component of the study has been to explore the total and partial associations between the field variables and analyze their relationships for a good fit model association. In the present chapter, the forest inventory information in the form of categorical variable was analyzed to study the multi-way effect among the variables. Fire incidence (as dependent variable) was analyzed for its dependence and ultimately its association with other field variables (independent variables) for initiation and spread of fires. The Test of Partial Associations helped to extract the relative associations between fire incidences and other variables having close relationship.

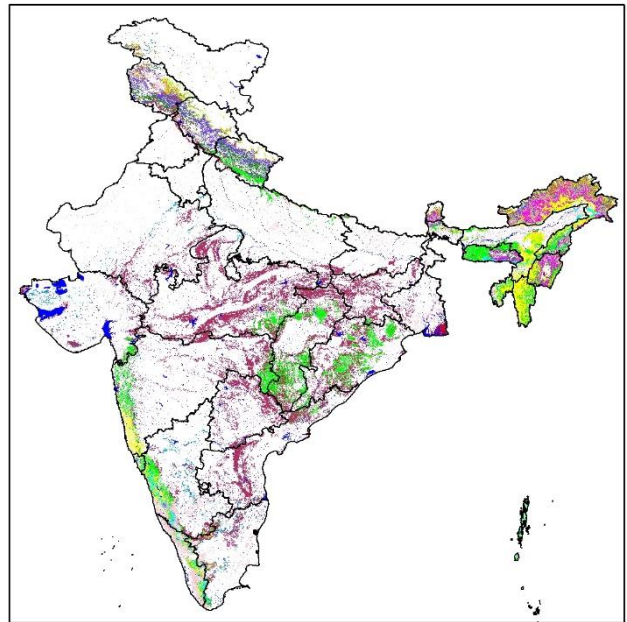
1.4.2. Generation of Forest Fire Risk Zone Maps

For each selected independent variables, spatial data were generated for every physiographic zones. Forest Type Map of 2023 has been used for creation of Forest Type layer. Altitude, slope and aspect layer have been generated from the ASTER DEM (Advanced Space-borne Thermal Emission and Reflection Radiometer's Digital Elevation Model, with 30 meter spatial resolution). Biotic Influence layer has been generated from Road Network and Habitation data. Grazing Incidences has been prepared using IDW interpolation techniques. Soil data from National Bureau of Soil Survey has been also used as a layer in the generation of Fire Risk Zone Maps.

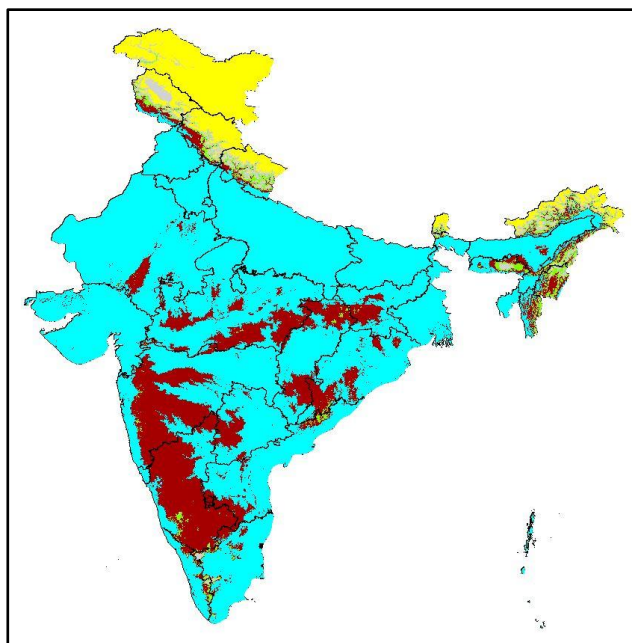
After generation of all spatial layers responsible for forest fire incidences (as shown in the figure 1.3), indexing has been performed, where, all the spatial layer were divided into four classes i.e low, moderate, high and very high. Further weights have been assigned to each layer, based on the analysis of archived forest fire detections, forest inventory and ground truth information. The generated forest fire risk zones are classified into five categories: Very High Risk, High Risk, Moderate Risk, Low Risk and No Risk. A brief methodology for the generation of Forest Fire Risk Zonation is shown in Figure 1.4.



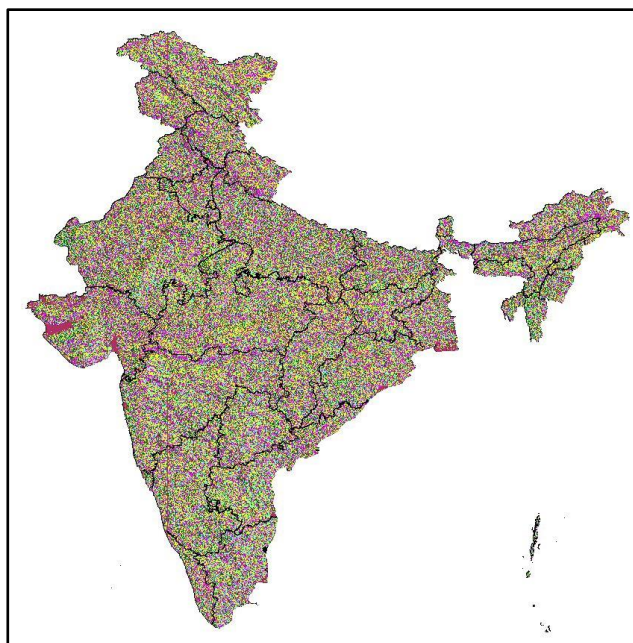
a) Forest Density Map



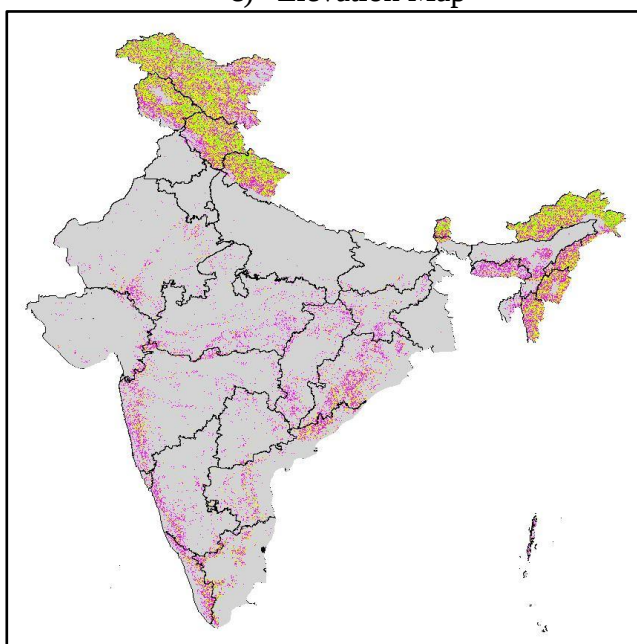
b) Forest Type Map



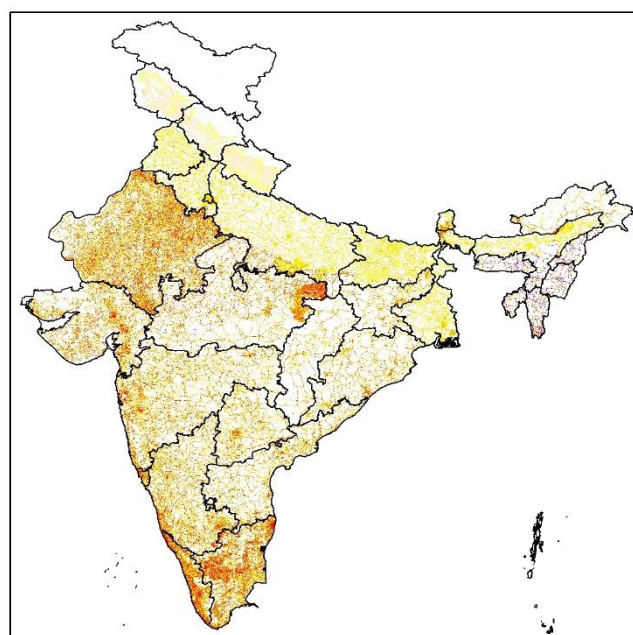
c) Elevation Map



d) Aspect Map



e) Slope Map



f) Biotic Influence Map

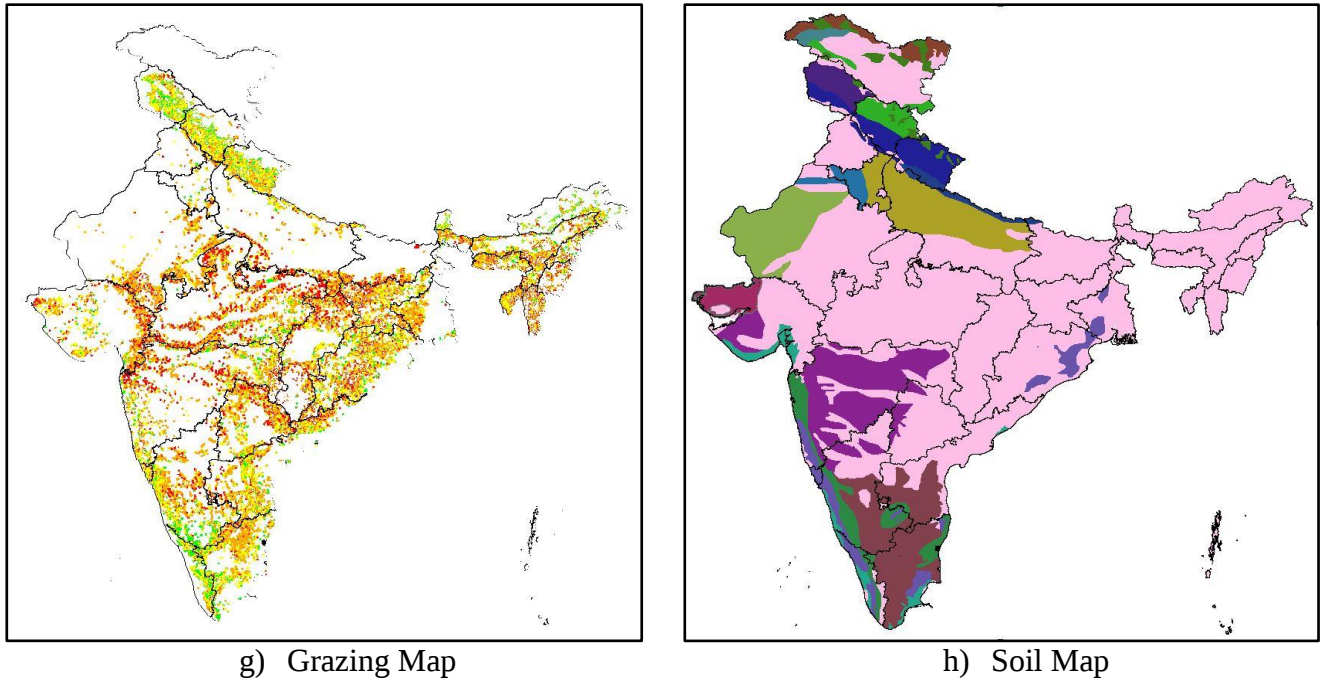


Figure 1.3. GIS layers of the identified independent variables

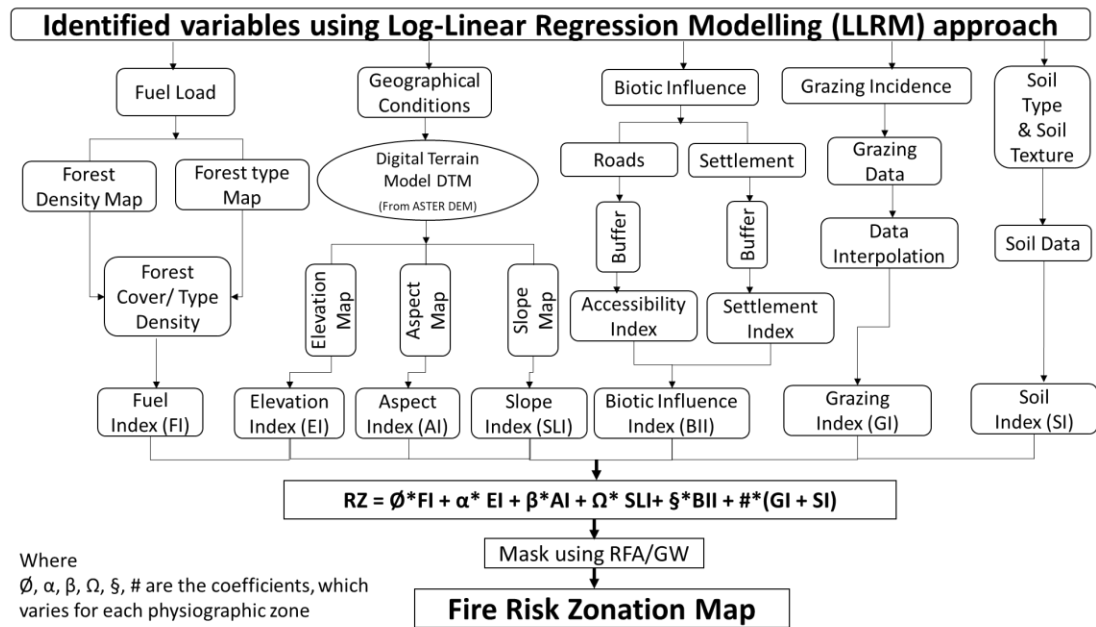


Figure 1.4. Methodology of Fire Risk Zone Map Generation

After creation of Forest Fire Risk Zones for each physiographic region, the same has been mosaiced and further masked with RFA/GW of the State/UT to get the Forest Fire Risk Zonation Map of the country. Map of Forest Fire Risk Zonation of the country with different risk zones is shown in the Figure 1.5.

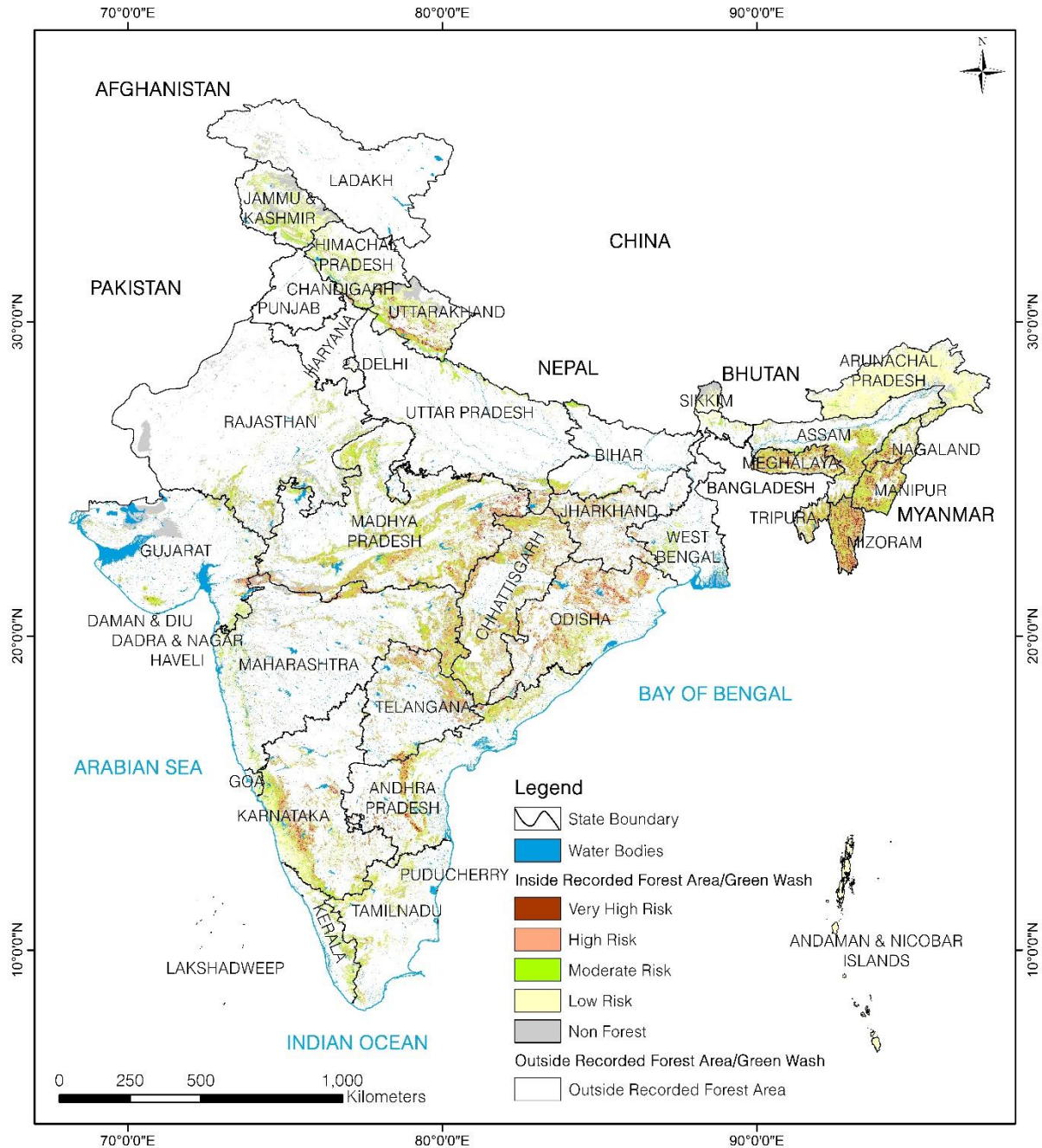


Figure 1.5. Map of Forest Fire Risk Zonation of the country

1.5. Results

The percentage of Recorded Forest Area/ Green Wash area under different Forest Fire Risk Zones is shown in the Table 1.1. It can be inferred that 3.13% of the total RFA/GW area falls under very high risk zone, 22.55% under high risk zone, 22.15% under moderate risk zone and 25.41% under low risk zone as shown in the Figure 1.5.

Table 1.1 Forest Area under Forest Fire Risk Zones

S.No.	Forest Fire Risk Zones	Area (in km ²)	% of Total Digitized RFA/GW Area
1	Very High Risk	23,166.08	3.13
2	High Risk	1,67,130.01	22.55
3	Moderate Risk	1,64,223.61	22.15
4	Low Risk	1,88,357.76	25.41
Total		5,42,877.46	73.24

The State/UT-wise forest fire risk zones is shown in the Table 1.2. The table shows that Mizoram has the maximum forest area under very high risk zone followed by Odisha and Madhya Pradesh. Maximum forest areas under high risk zone falls in Madhya Pradesh followed by Chhattisgarh & Odisha.

The area falling under very high biotic influence and high slope gradients along with the presence of Mixed Deciduous Forest in Mizoram has been the reason for the state having largest area under very high risk zone. Similarly, in the states of Madhya Pradesh, Odisha and Chhattisgarh, high biotic influence along with the presence of Deciduous Forest and large forest area cover has been the reason for these states having larger area under very high risk zones. Additionally, the dry season, characterized by low humidity and high temperatures, creates favorable conditions for fire ignition and rapid spread.

Table 1.1 Forest Area under Forest Fire Risk Zones(Area in km²)

State/UTs	RFA/ GW area	Forest Fire Risk Zone				
		Very High	High	Moderate	Low	Total
Andhra Pradesh	37,095.46	1,397.97	7,513.79	8,550.15	11,205.24	28,667.15
Arunachal Pradesh	63,752.00	28.73	377.19	1,310.87	56,902.15	58,618.94
Assam	27,545.50	934.18	5,248.63	7,409.53	6,206.94	19,799.28
Bihar	6,378.06	83.08	1,794.70	2,626.45	576.36	5,080.59
Chhattisgarh	53,034.54	1,406.19	21,605.49	15,396.19	4,360.12	42,767.99
Delhi	96.97	0.00	7.43	24.47	41.81	73.71
Goa	1,326.48	0.00	33.45	369.08	826.09	1,228.62
Gujarat	30,354.00	212.19	1,785.36	3,631.45	4,600.20	10,229.20
Haryana	1,628.34	12.57	308.78	155.27	313.17	789.79
Himachal Pradesh	14,024.98	110.27	924.30	4,229.34	5,500.07	10,763.98
Jharkhand	19,096.52	850.48	7,423.85	3,553.54	926.85	12,754.72
Karnataka	31,036.84	899.19	7,537.94	7,512.62	9,890.85	25,840.60
Kerala	11,554.99	7.56	878.69	2,821.75	6,237.87	9,945.87

State/UTs	RFA/ GW area	Forest Fire Risk Zone				
		Very High	High	Moderate	Low	Total
Madhya Pradesh	92,769.42	2,563.99	28,873.28	28,961.00	9,163.90	69,562.17
Maharashtra	57,724.83	902.85	14,555.80	14,266.91	7,876.17	37,601.73
Manipur	17,476.61	1,677.96	5,483.25	5,511.72	2,819.13	15,492.06
Meghalaya	17,490.61	1,568.73	5,390.73	4,632.62	3,624.43	15,216.51
Mizoram	20,570.21	3,448.79	7,247.83	5,438.40	1,796.07	17,931.09
Nagaland	10,610.99	817.11	2,481.27	2,884.31	2,674.72	8,857.41
Odisha	42,430.62	2,748.68	18,816.43	8,151.85	5,058.27	34,775.23
Punjab	924.03	10.70	228.96	306.11	239.06	784.83
Rajasthan	35,963.43	243.40	3,589.04	6,966.78	4,748.26	15,547.48
Sikkim	5,414.38	0.00	0.58	18.87	2,241.78	2,261.23
Tamil Nadu	21,585.02	91.88	2,701.47	4,769.99	10,619.94	18,183.28
Telangana	26,881.38	1,093.11	10,454.91	5,768.49	2,444.76	19,761.27
Tripura	5,955.00	429.95	2,468.90	2,028.72	560.76	5,488.33
Uttar Pradesh	13,407.59	337.25	2,801.13	3,862.96	2,648.39	9,649.73
Uttarakhand	25,494.47	1,191.25	4,411.47	6,007.41	5,363.83	16,973.96
West Bengal	11,787.40	69.16	1,244.54	2,903.82	3,548.36	7,765.88
Andaman & Nicobar Is.	6,747.11	0.00	0.00	0.00	6,173.61	6,173.61
Chandigarh	11.32	1.18	7.08	0.73	0.00	8.99
Dadra & Nagar Haveli and Daman & Diu	196.95	0.00	4.52	110.88	47.28	162.68
Jammu and Kashmir	27,702.46	27.68	929.21	4,035.54	8,255.59	13,248.02
Ladakh	3,184.79	0.00	0.00	5.27	863.11	868.38
Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00
Puducherry	9.51	0.00	0.00	0.52	2.62	3.14
Total	7,41,262.81	23,166.08	1,67,130.01	1,64,223.61	1,88,357.76	5,42,877.46

1.6. Conclusion

Geospatial information on Forest Fire Risk Zonation Index (FRZI) is helpful to identify regions having more susceptibility to fires on ground. This information is crucial for forest managers to take appropriate measures for long term fire prevention and mitigation efforts based on the static parameters. The forest fire risk zone model can be used for prioritizing risk area for resource mobilization, creation of watch towers, fire lines creation and public awareness etc. This can also be used for creating of fire lines, regular clearing of fire lines and setting up of watch towers at strategic locations for visualizing a larger area. The FRZI overlaid on DEM can be used to identify visual and invisible areas from an observation point. This helps to locate the strategic location for establishing watch towers for visualizing large area making all fires detectable.

Chapter 2

State/UT-wise Analysis

2.1. Andhra Pradesh

Different forest fire risk zones inside RFA is shown in the Table 2.1 From the table, it can be inferred that 3.77% of the total RFA area falls under very high risk, 20.26% under high risk, 23.05% under moderate risk and 30.21% under low risk. Spatial distribution of forest fire risk zones is shown in the map of the state in Figure 2.1

Table 2.1. District-wise RFA/GW Area in different forest fire risk zone in Andhra Pradesh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Alluri Sitharama Raju	218.11	1,815.65	2,215.46	1,943.27	6,192.49
Anakapalli	3.34	111.00	168.04	183.27	465.65
Ananthapuramu	31.39	237.18	135.30	112.33	516.20
Annamayya	312.08	784.01	542.47	729.77	2,368.33
Bapatla	0.09	0.32	3.35	42.77	46.53
Chittoor	9.74	185.96	492.23	774.46	1,462.39
East Godavari	0.00	2.51	5.93	57.43	65.87
Eluru	8.31	198.73	356.64	452.19	1,015.87
Guntur	0.00	1.69	3.21	2.04	6.94
Kakinada	0.53	55.54	83.07	223.74	362.88
Konaseema	0.00	0.00	0.00	60.31	60.31
Krishna	0.02	0.26	1.27	88.29	89.84
Kurnool	6.60	65.23	40.05	32.45	144.33
Nandyal	0.03	26.60	100.54	128.13	255.30
NTR	231.91	881.23	600.61	893.14	2,606.89
Palnadu	0.25	83.36	325.30	697.26	1,106.17
Parvathipuram Manyam	9.75	205.22	337.22	236.49	788.68
Prakasam	181.49	968.90	1,160.76	1,517.08	3,828.23
Sri Potti Sriramulu Nellore	15.80	135.21	328.84	810.57	1,290.42
Sri Sathya Sai	148.98	552.10	152.75	53.10	906.93
Srikakulam	0.31	66.75	141.15	140.11	348.32
Tirupati	32.45	369.26	575.35	1,051.92	2,028.98
Visakhapatnam	0.16	18.50	28.28	69.85	116.79
Vizianagaram	1.23	37.94	60.85	47.24	147.26
West Godavari	0.00	0.00	0.00	0.04	0.04
YSR Kadapa	185.40	710.64	691.48	857.99	2,445.51
Total	1,397.97	7,513.79	8,550.15	11,205.24	28,667.15

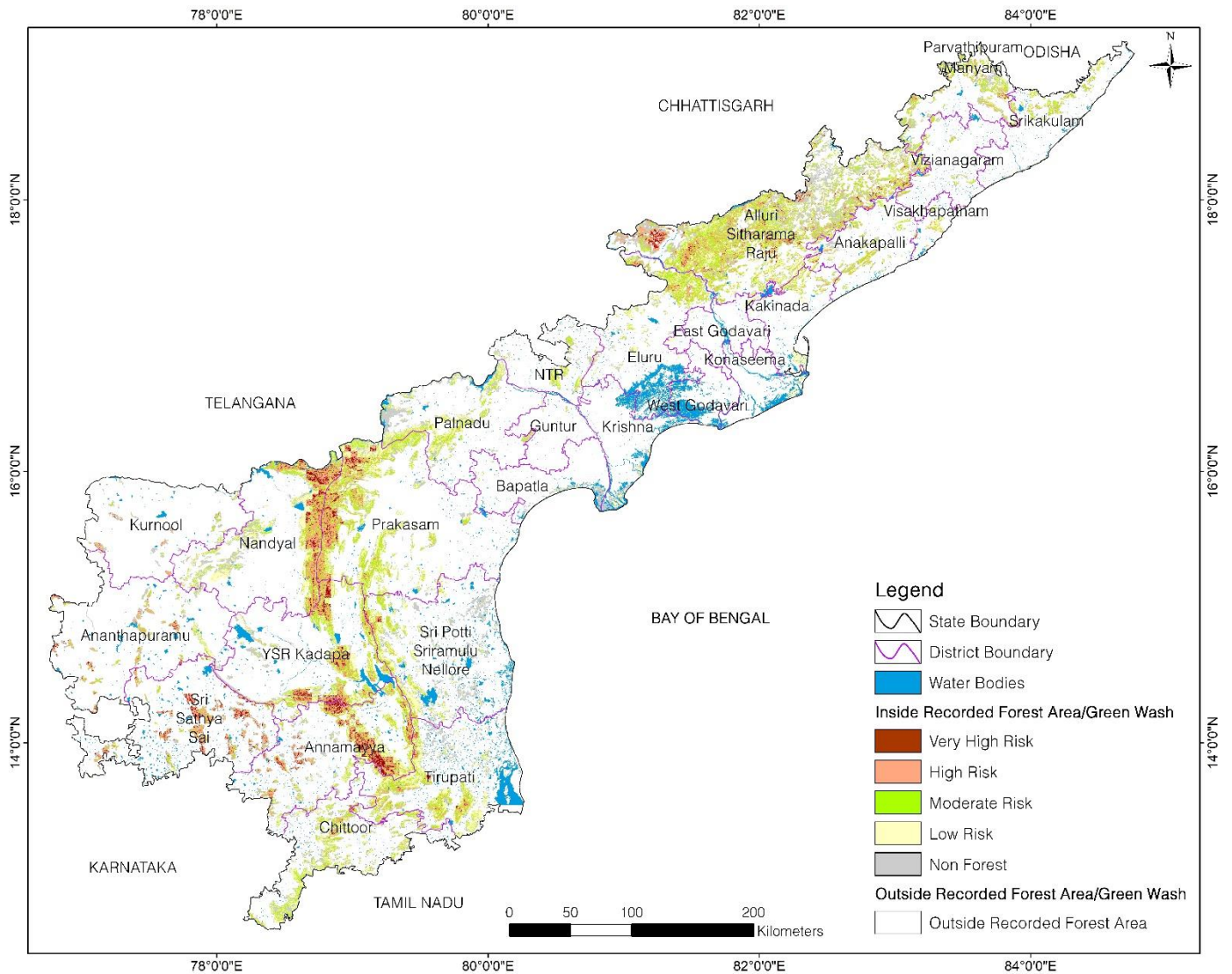


Figure 2.1. Forest fire risk zonation map of Andhra Pradesh

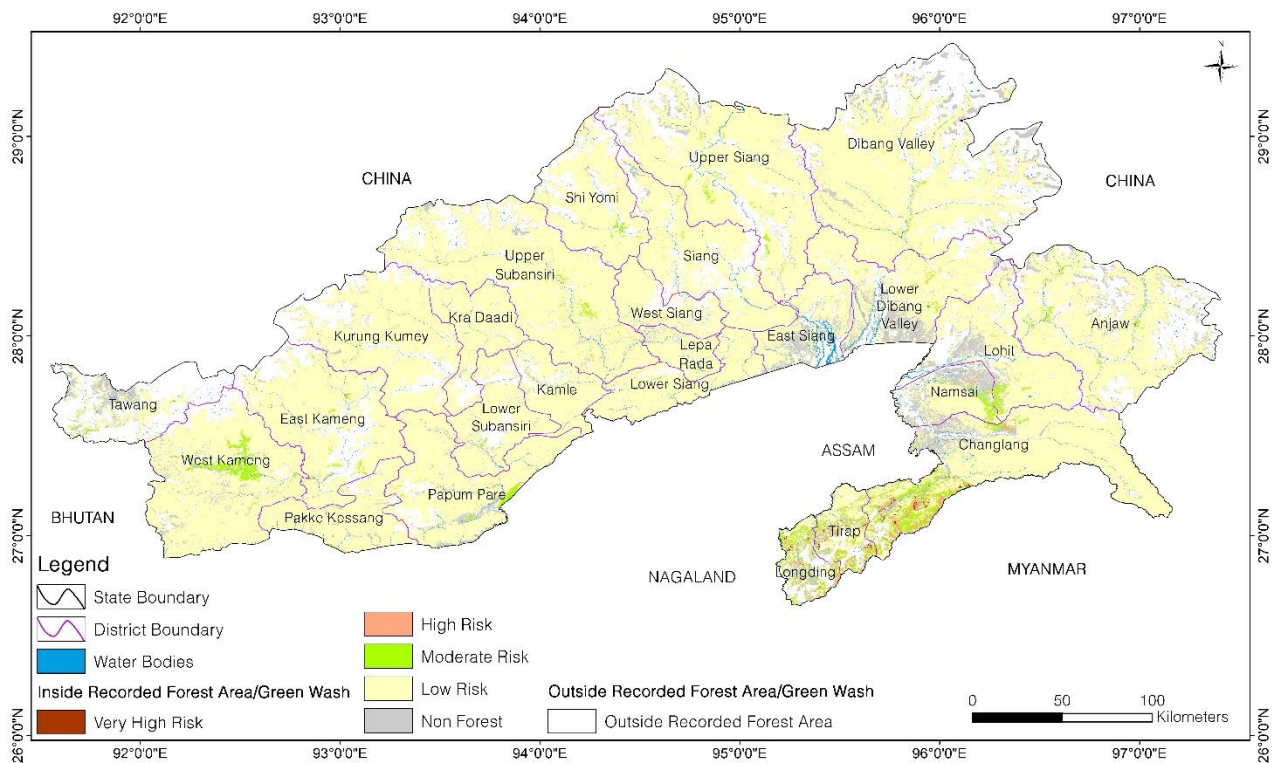
Very high fire risk and high fire risk zones has been observed in Alluri Sitharama Raju, Prakasam, and Nandyal districts. Alluri Sitharama Raju district has the largest RFA under forest fire risk zone.

2.2. Arunachal Pradesh

Different forest fire risk zones inside GW is shown in the Table 2.2 From the table, it can be inferred that 0.05% of the total GW area falls under very high risk, 0.59% under high risk, 2.06% under moderate risk and 89.26% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.2.

Table 2.2 District-wise RFA/GW Area in different forest fire risk zone in Arunachal Pradesh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Anjaw	0.00	0.02	46.55	3,677.97	3,724.54
Changlang	15.15	207.34	349.96	3,708.61	4,281.06
Dibang Valley	0.00	0.07	32.48	5,573.76	5,606.31
East Kameng	0.00	0.02	31.76	3,208.53	3,240.31
East Siang	0.00	0.00	0.71	927.60	928.31
Kamle	0.00	0.00	6.37	1,157.57	1,163.94
Kra Daadi	0.00	0.00	0.60	1,491.59	1,492.19
Kurung Kumey	0.00	0.00	3.16	3,209.26	3,212.42
Lepa Rada	0.00	0.00	0.89	668.22	669.11
Lohit	0.00	0.45	56.00	1,977.82	2,034.27
Longding	4.62	70.44	144.56	285.00	504.62
Lower Dibang Valley	0.00	0.05	27.43	2,274.83	2,302.31
Lower Siang	0.00	0.00	1.35	1,620.99	1,622.34
Lower Subansiri	0.00	0.00	12.69	1,543.28	1,555.97
Namsai	0.00	7.68	63.00	614.28	684.96
Pakke Kessang	0.00	0.00	6.09	1,709.41	1,715.50
Papum Pare	0.00	0.01	54.88	2,903.48	2,958.37
Shi Yomi	0.00	0.00	19.38	1,973.84	1,993.22
Siang	0.00	0.00	11.40	2,480.27	2,491.67
Tawang	0.00	0.00	10.62	520.03	530.65
Tirap	8.96	90.45	139.56	483.09	722.06
Upper Siang	0.00	0.40	48.55	4,754.67	4,803.62
Upper Subansiri	0.00	0.23	39.32	5,208.52	5,248.07
West Kameng	0.00	0.03	203.34	3,894.85	4,098.22
West Siang	0.00	0.00	0.22	1,034.68	1,034.90
Total	28.73	377.19	1,310.87	56,902.15	58,618.94



89.26% of the forest cover inside GW falls in the low fire risk zone, attributing to the occasional fires in the state.

2.3. Assam

Different forest fire risk zones inside GW is shown in the Table 2.3. From the table, it can be inferred that 3.39% of the total GW area falls under very high risk, 19.05% under high risk, 26.90% under moderate risk and 22.53% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.3.

Table 5.3 District-wise RFA/GW Area in different forest fire risk zone in Assam

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Baksa	0.00	0.07	25.62	29.28	54.97
Barpeta	0.00	0.00	0.03	0.92	0.95
Biswanath	0.03	2.21	41.48	96.33	140.05
Bongaigaon	0.00	0.96	23.56	105.27	129.79
Cachar	67.43	530.65	698.26	500.15	1,796.49
Charaideo	0.00	3.61	42.97	92.56	139.14
Chirang	0.00	0.17	38.49	94.43	133.09
Darrang	0.00	0.59	1.03	2.47	4.09
Dhemaji	0.02	1.51	8.56	130.71	140.80
Dhubri	0.00	0.34	5.13	15.77	21.24
Dibrugarh	0.00	2.21	38.94	138.33	179.48
Dima Hasao	316.45	1,385.79	1,344.62	794.85	3,841.71
Goalpara	1.24	21.25	128.15	158.54	309.18
Golaghat	9.96	91.99	165.41	92.36	359.72
Hailakandi	29.96	238.97	256.32	101.59	626.84
Hojai	4.33	38.77	242.42	92.19	377.71
Jorhat	0.00	3.98	128.40	84.16	216.54
Kamrup	2.57	85.22	344.08	252.28	684.15
Kamrup Metropolitan	0.73	65.96	32.59	22.84	122.12
Karbi Anglong	252.29	1,782.79	2,357.01	888.38	5,280.47
Karimganj	32.75	175.94	153.79	42.82	405.30
Kokrajhar	0.00	1.30	119.37	883.26	1,003.93
Lakhimpur	0.00	0.00	0.58	169.45	170.03
Majuli	0.00	0.00	0.00	0.00	0.00
Morigaon	1.22	34.03	45.75	20.46	101.46
Nagaon	4.20	53.47	74.60	92.43	224.70
Nalbari	0.00	0.00	0.00	0.00	0.00
Sivasagar	0.14	12.94	54.27	7.54	74.89
Sonitpur	0.03	3.12	83.40	283.09	369.64
South Salmara Mankachar	0.00	0.28	5.38	5.63	11.29
Tinsukia	0.05	20.10	185.49	647.43	853.07
Udalguri	0.00	0.04	3.77	13.72	17.53
West Karbi Anglong	210.78	690.37	760.06	347.70	2,008.91
Total	934.18	5,248.63	7,409.53	6,206.94	19,799.28

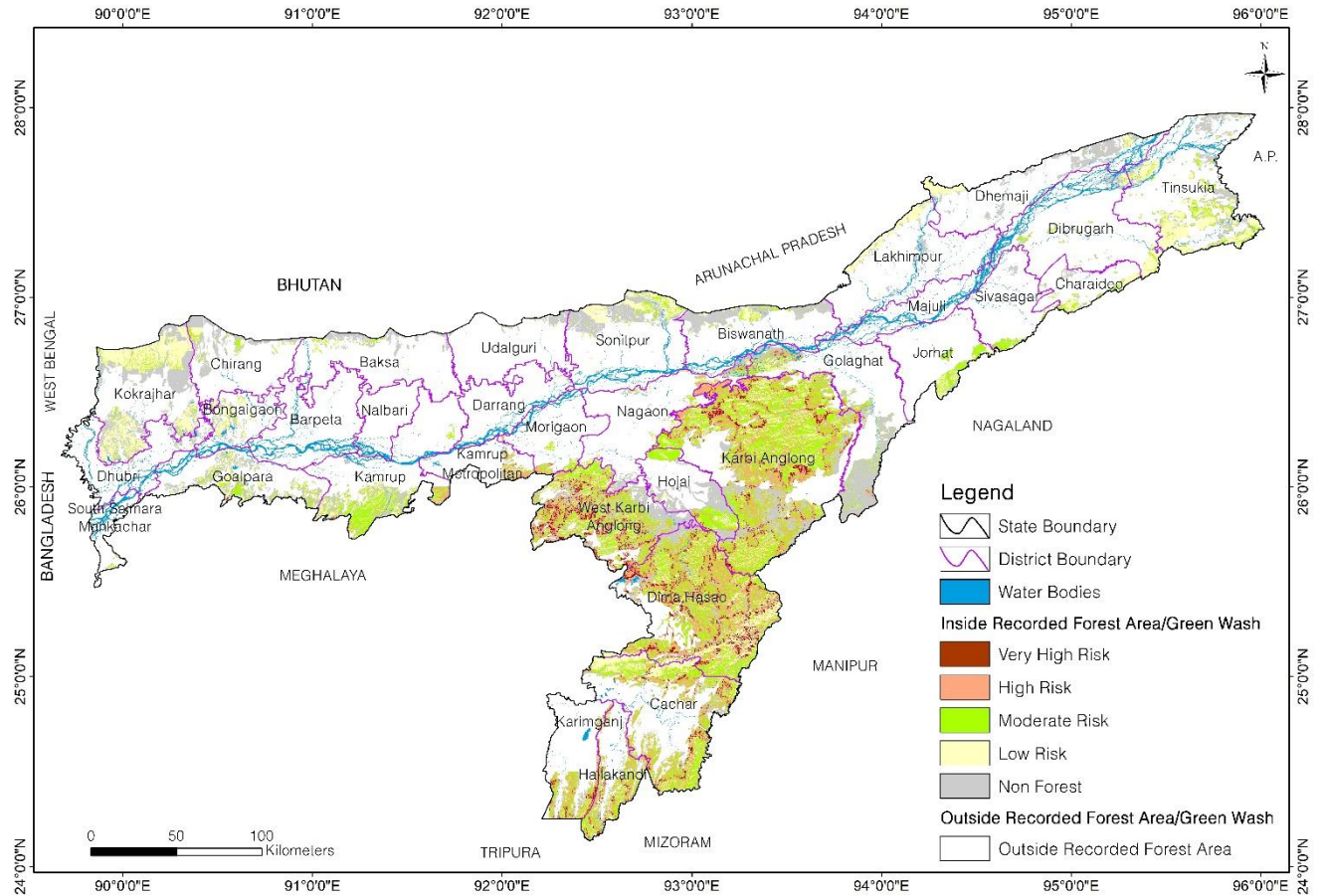


Figure 2.3 Forest fire risk zonation map of Assam

Very high risk and high risk zones has been observed in Karbi Anglong, West Karbi Anglong, Dima Hasao etc. Around 49.34% of the forest cover inside GW falls under very high fire risk to moderate fire risk zone.

2.4. Bihar

Different forest fire risk zones inside RFA is shown in the Table 2.4. From the table, it can be inferred that 1.30% of the total RFA area falls under very high risk, 28.14% under high risk, 41.18% under moderate risk and 9.04% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.4.

Table 2.4. District-wise RFA/GW Area in different forest fire risk zone in Bihar

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Araria	0.00	0.00	0.11	6.20	6.31
Arwal	0.00	0.00	0.00	0.00	0.00
Aurangabad	3.44	50.83	56.67	42.52	153.46
Banka	6.57	94.57	62.39	77.68	241.21
Begusarai	0.00	0.00	0.00	0.00	0.00
Bhagalpur	0.00	0.00	0.07	0.02	0.09
Bhojpur	0.00	0.00	0.00	0.00	0.00
Buxar	0.00	0.00	0.00	0.00	0.00
Darbhanga	0.00	0.00	0.00	0.00	0.00
East Champaran	0.00	0.00	0.00	0.08	0.08
Gaya	13.39	192.78	322.40	90.55	619.12
Gopalganj	0.00	0.00	0.00	0.00	0.00
Jamui	27.13	244.22	256.17	87.41	614.93
Jehanabad	0.00	0.72	4.28	0.12	5.12
Kaimur	9.14	466.99	542.55	28.69	1,047.37
Katihar	0.00	0.00	0.00	0.00	0.00
Khagaria	0.00	0.00	0.00	0.00	0.00
Kishanganj	0.00	0.00	0.00	0.00	0.00
Lakhisarai	0.13	1.24	62.12	95.22	158.71
Madhepura	0.00	0.00	0.00	0.00	0.00
Madhubani	0.00	0.00	0.00	0.00	0.00
Munger	1.45	164.60	110.10	31.50	307.65
Muzaffarpur	0.00	0.00	0.00	0.00	0.00
Nalanda	0.00	0.84	20.90	19.33	41.07
Nawada	4.13	119.61	324.95	51.72	500.41
Patna	0.00	0.00	0.00	0.00	0.00
Purnia	0.00	0.00	0.00	1.86	1.86
Rohtas	16.49	336.54	270.12	9.87	633.02
Saharsa	0.00	0.00	0.00	0.00	0.00
Samastipur	0.00	0.00	0.00	0.00	0.00
Saran	0.00	0.00	0.00	0.00	0.00
Sheikhpura	0.00	0.00	0.00	0.00	0.00
Sheohar	0.00	0.00	0.00	0.00	0.00
Sitamarhi	0.00	0.00	0.00	0.00	0.00
Siwan	0.00	0.00	0.00	0.00	0.00

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Supaul	0.00	0.00	0.00	0.00	0.00
Vaishali	0.00	0.00	0.00	0.00	0.00
West Champaran	1.21	121.76	593.62	33.59	750.18
Total	83.08	1,794.70	2,626.45	576.36	5,080.59

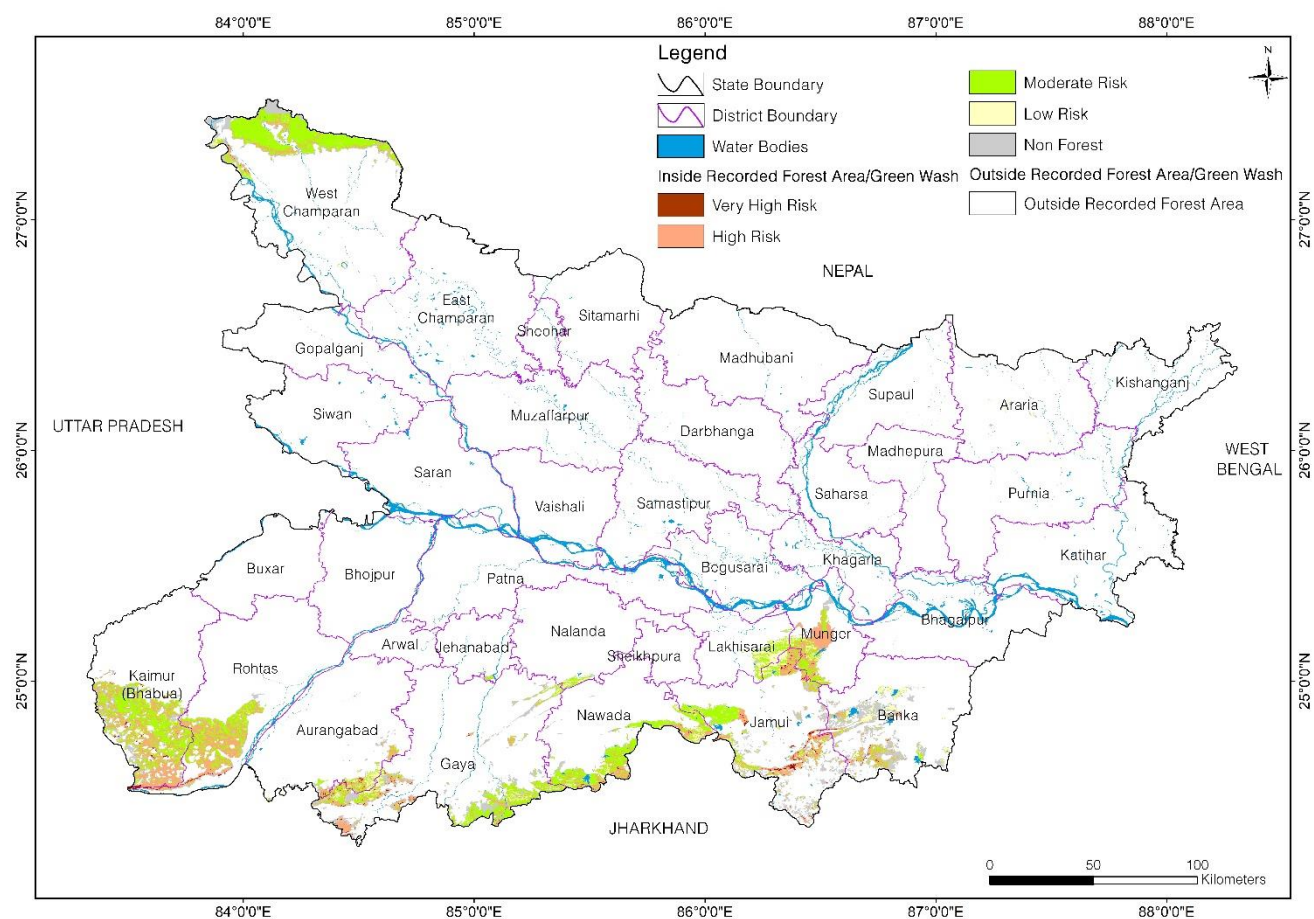


Figure 2.4 Forest fire risk zonation map of Bihar

High fire risk to moderate fire risk zones has been observed in Jamui, Munger, Rohtas, Nawada, Banka, and Gaya. Around 70.62% of the forest cover inside RFA falls under the high fire risk to moderate fire risk zone.

2.5. Chhattisgarh

Different forest fire risk zones inside RFA is shown in the Table 2.5. From the table, it can be inferred that 2.65% of the total RFA area falls under very high risk, 40.74% under high risk, 29.03% under moderate risk and 8.22% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.5.

Table 2.5 District-wise RFA/GW Area in different forest fire risk zone in Chhattisgarh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Balod	24.38	365.48	191.51	57.08	638.45
Balodabazar Bhatapara	21.77	479.49	407.99	58.11	967.36
Balrampur	113.08	1,592.20	793.25	178.52	2,677.05
Bastar	46.02	950.82	584.09	120.30	1,701.23
Bemetara	0.00	0.00	0.00	0.00	0.00
Bijapur	52.55	1,544.02	2,370.11	909.91	4,876.59
Bilaspur	21.53	257.97	250.24	56.65	586.39
Dantewada	12.92	384.94	264.44	61.98	724.28
Dhamtari	32.07	966.96	668.26	115.01	1,782.30
Durg	0.00	0.00	0.00	0.00	0.00
Gariaband	88.33	1,189.84	770.45	197.27	2,245.89
Gaurela Pendra Marwahi	13.28	336.73	240.94	35.76	626.71
Janjgir Champa	3.41	63.32	53.89	19.12	139.74
Jashpur	94.18	801.32	373.71	84.25	1,353.46
Kawardha (Kabirdham)	87.29	944.31	297.08	51.01	1,379.69
Kondagaon	39.21	957.11	593.79	202.27	1,792.38
Korba	138.36	1,676.49	878.69	190.63	2,884.17
Korea	107.83	2,051.78	1,293.76	294.58	3,747.95
Mahasamund	34.99	369.91	286.17	84.49	775.56
Mungeli	56.02	546.62	392.66	29.74	1,025.04
Narayanpur	11.03	224.34	233.41	66.34	535.12
Raigarh	107.70	1,069.90	577.11	139.13	1,893.84
Raipur	0.00	0.83	7.15	7.79	15.77
Raj Nandgaon	111.05	1,094.70	722.22	310.96	2,238.93
Sukma	18.62	798.63	909.51	359.65	2,086.41
Surajpur	42.20	1,045.20	907.18	257.66	2,252.24
Surguja	53.90	663.33	370.92	90.93	1,179.08
Uttar Bastar Kanker (Kanker)	74.47	1,229.25	957.66	380.98	2,642.36
Total	1,406.19	21,605.49	15,396.19	4,360.12	42,767.99

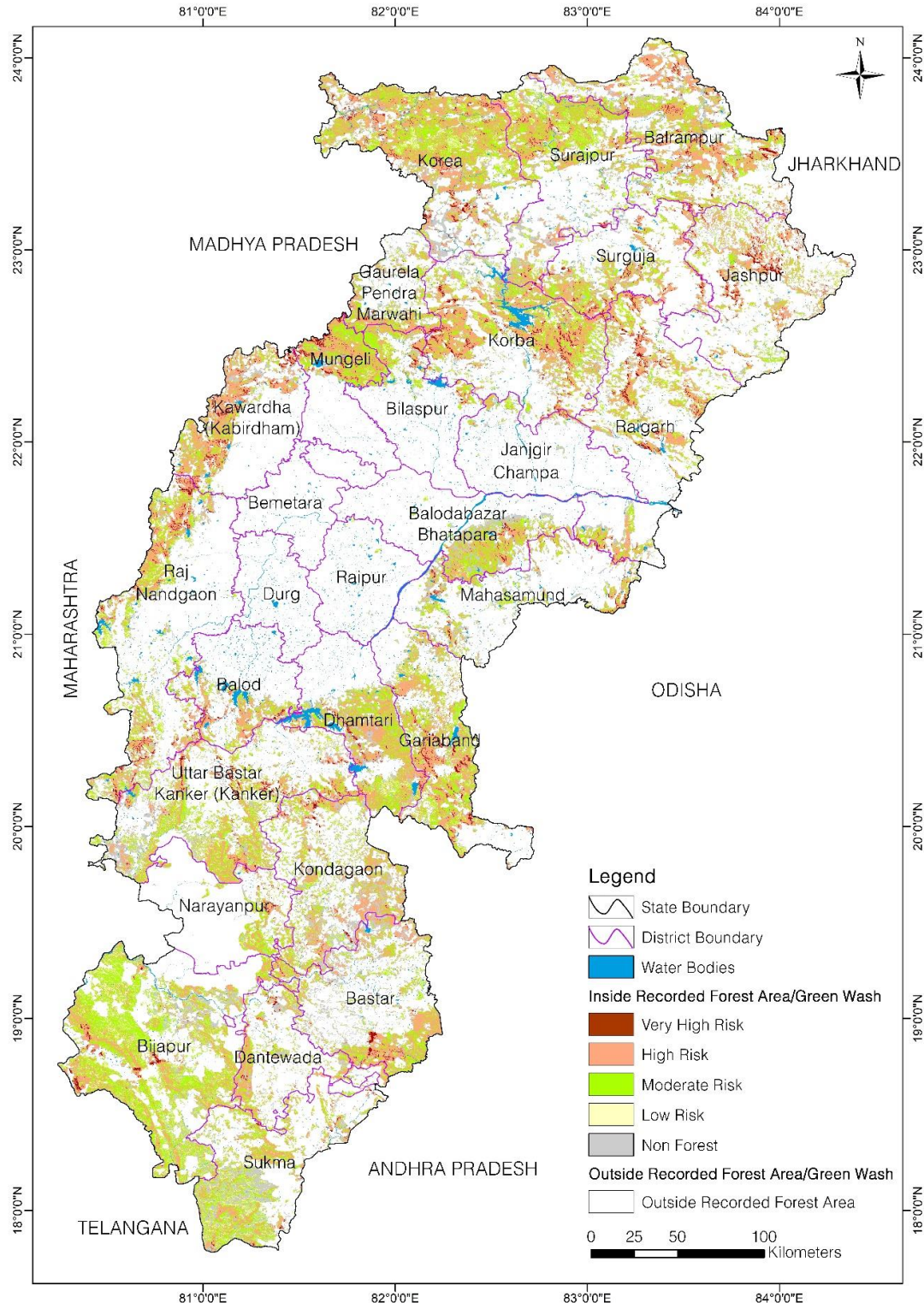


Figure 2.5 Forest fire risk zonation map of Chhattisgarh

Very high fire risk and high fire risk zones has been observed in Bastar, Gariaband and Jashpur districts. Around 40.74% of the forest cover inside RFA falls under the high fire risk zone.

2.6. Delhi

Different forest fire risk zones inside RFA is shown in the Table 2.6. From the table, it can be inferred that 7.66% under high risk, 25.23% under moderate risk and 43.12% under low risk. No forest cover inside RFA has been observed in the very high fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.6.

Table 2.6 District-wise RFA/GW Area in different forest fire risk zone in Delhi

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Central Delhi	0.00	0.52	2.40	0.01	2.93
East Delhi	0.00	0.00	0.00	0.00	0.00
New Delhi	0.00	5.46	14.32	1.03	20.81
North Delhi	0.00	0.00	0.00	0.00	0.00
North-East Delhi	0.00	0.00	0.00	0.00	0.00
North-West Delhi	0.00	0.00	0.00	0.00	0.00
Shahadra	0.00	0.00	0.00	0.00	0.00
South Delhi	0.00	1.39	7.05	37.36	45.80
South-East Delhi	0.00	0.00	0.57	3.41	3.98
South-West Delhi	0.00	0.00	0.03	0.00	0.03
West Delhi	0.00	0.06	0.10	0.00	0.16
Total	0.00	7.43	24.47	41.81	73.71

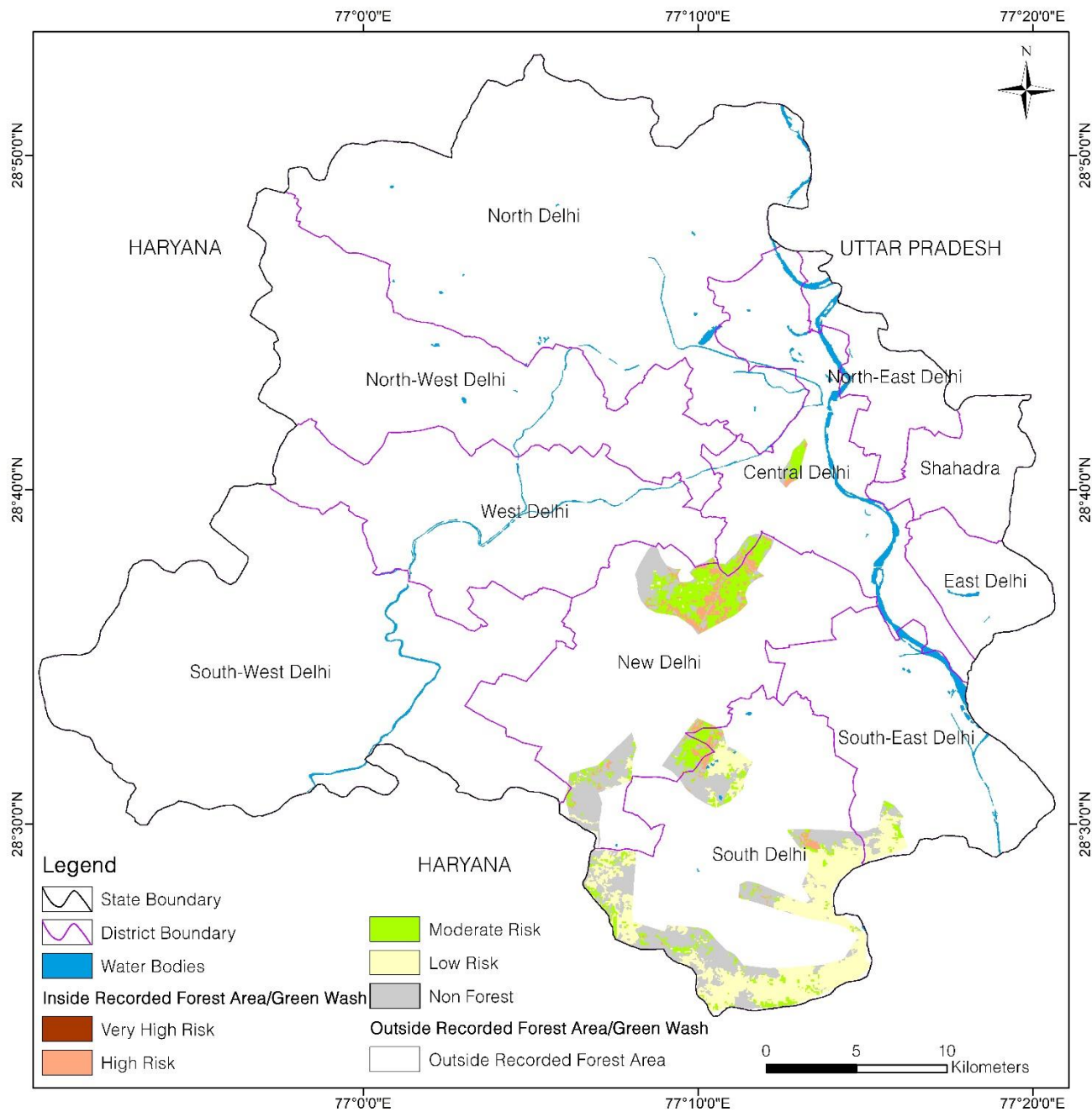


Figure 2.6 Forest fire risk zonation map of Delhi

High fire risk zones has been observed in New Delhi, South Delhi. Around 43.12% of the forest cover inside RFA falls under the low fire risk zone.

2.7. Goa

Different forest fire risk zones inside RFA is shown in the Table 2.7. From the table, it can be inferred that 2.52% of the total RFA area falls under high risk, 27.82% under moderate risk and 62.28% under low risk. No forest cover inside RFA has been observed in the very high fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.7.

Table 2.7 District-wise RFA/GW Area in different forest fire risk zone in Goa

Area in km²

District	Surface Fuel Load Class				Total
	Very High	High	Moderate	Low	
North Goa	0.00	11.55	132.65	217.92	362.12
South Goa	0.00	21.90	236.43	608.17	866.50
Total	0.00	33.45	369.08	826.09	1,228.62

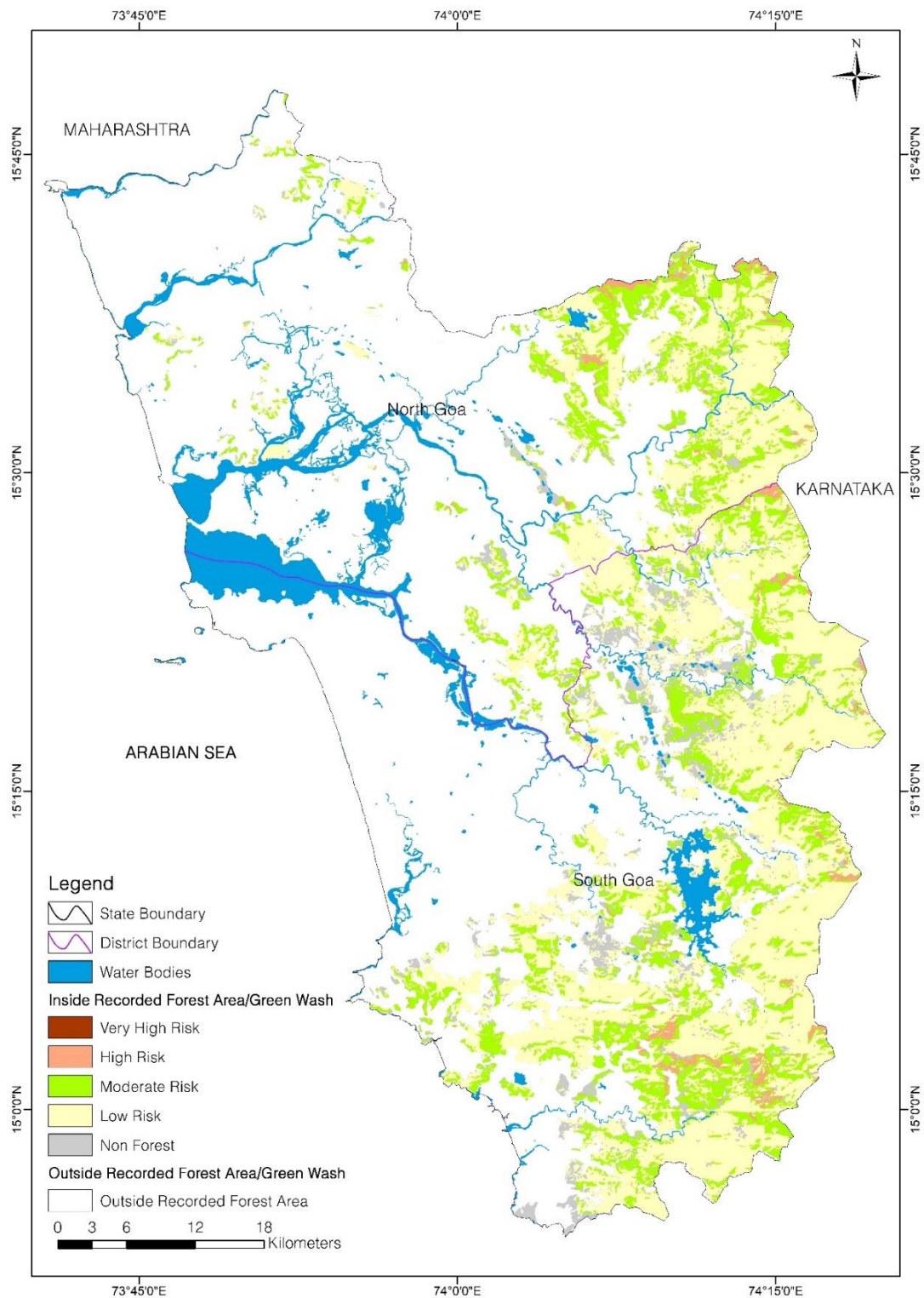


Figure 2.7 Forest fire risk zonation map of Goa

Around 62.28% of the forest cover inside RFA falls under low fire risk zone.

2.8. Gujarat

Different forest fire risk zones inside RFA is shown in the Table 2.8. From the table, it can be inferred that 0.70% of the total RFA area falls under very high risk, 5.88% under high risk, 11.96% under moderate risk and 15.16% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.8.

Table 2.8 District-wise RFA/GW Area in different forest fire risk zone in Gujarat
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ahmadabad	0.00	0.00	0.00	0.00	0.00
Amreli	1.83	30.28	92.31	74.16	198.58
Anand	0.00	0.00	0.00	0.00	0.00
Arvalli	0.97	36.96	83.80	87.82	209.55
Banaskantha	12.82	191.88	361.20	195.10	761.00
Bharuch	9.82	27.92	24.60	55.37	117.71
Bhavnagar	0.01	1.55	17.71	57.41	76.68
Botad	0.00	0.22	0.30	4.46	4.98
Chhotaudepur	9.48	130.73	121.77	142.06	404.04
Dahod	0.20	6.88	122.75	297.79	427.62
Dang	0.17	45.69	408.18	479.24	933.28
Devbhumi Dwarka	0.08	8.05	27.16	62.94	98.23
Gandhinagar	0.00	0.00	0.00	11.44	11.44
Gir Somnath	1.26	15.62	34.69	18.34	69.91
Jamnagar	0.00	9.93	31.32	101.17	142.42
Junagadh	38.54	355.61	754.02	323.46	1,471.63
Kachchh	1.01	20.98	305.20	777.70	1,104.89
Kheda	0.00	0.00	0.22	12.95	13.17
Mehesana	0.03	0.77	8.99	35.06	44.85
Mahisagar	0.09	3.80	55.18	138.66	197.73
Morbi	0.00	1.91	21.01	76.24	99.16
Narmada	116.27	605.09	109.74	29.18	860.28
Navsari	0.00	1.22	80.07	103.83	185.12
Panchmahals	0.03	1.74	50.41	310.21	362.39
Patan	0.01	1.57	15.37	59.15	76.10
Porbandar	0.87	25.69	52.79	41.94	121.29
Rajkot	0.98	10.27	18.26	13.03	42.54
Sabarkantha	9.56	135.47	223.75	130.22	499.00
Surat	0.08	1.27	58.11	141.92	201.38
Surendranagar	0.00	0.58	8.08	75.83	84.49
Tapi	8.08	101.05	169.68	484.53	763.34
Vadodara	0.00	0.00	0.39	8.99	9.38
Valsad	0.00	12.63	374.39	250.00	637.02
Total	212.19	1,785.36	3,631.45	4,600.20	10,229.20

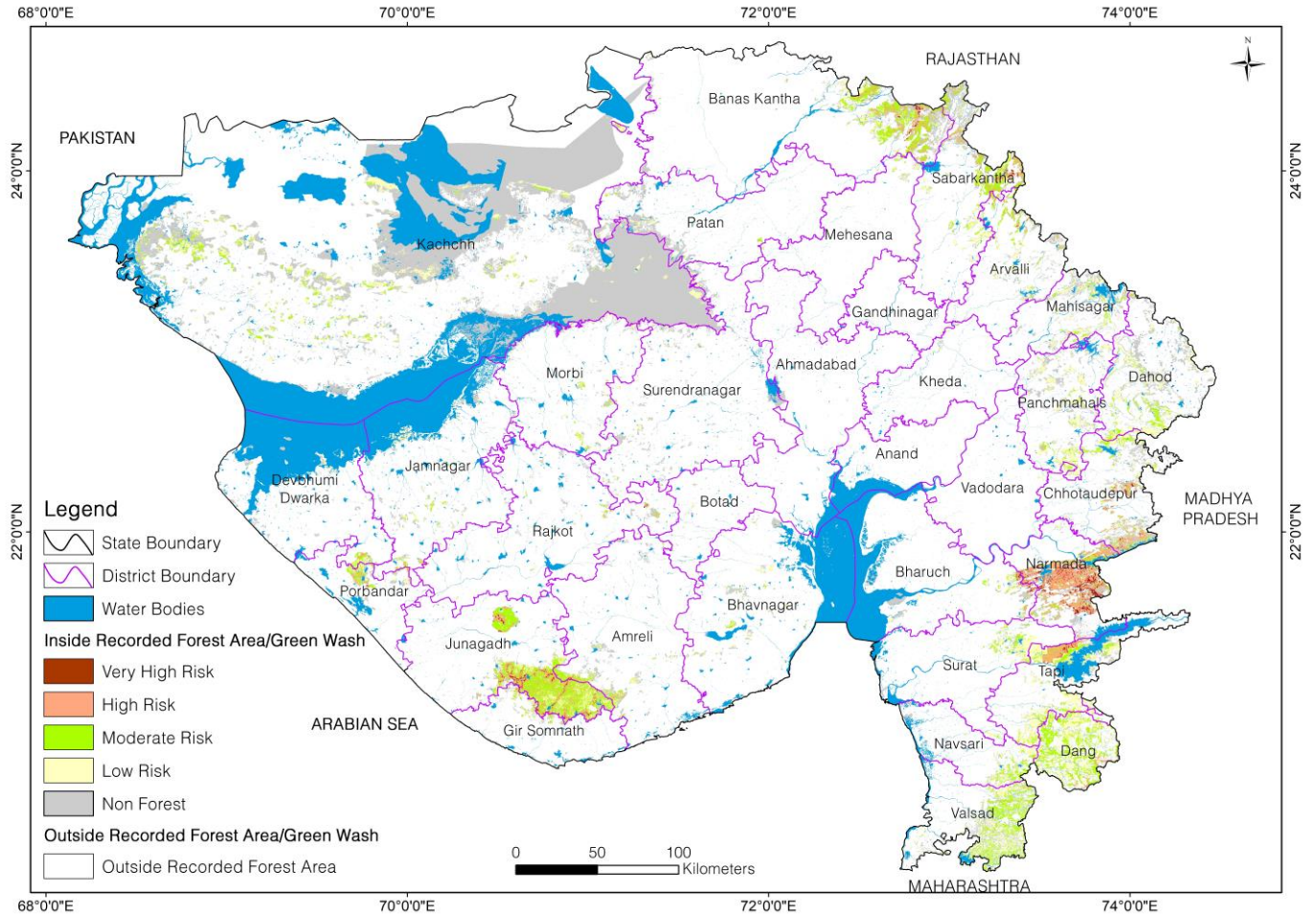


Figure 2.8 Forest fire risk zone map of Gujarat

Very high fire risk and high fire risk zones has been observed in Narmada, Tapi and Junagadh districts. Around 27.12% of the forest cover inside RFA falls under moderate to low fire risk zone.

2.9. Haryana

Different forest fire risk zones inside RFA is shown in the Table 2.9. From the table, it can be inferred that 0.77% of the total RFA area falls under very high risk, 18.96% under high risk, 9.54% under moderate risk and 19.23% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.9.

Table 2.9 District-wise RFA/GW Area in different forest fire risk zone in Haryana

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ambala	0.37	4.04	4.05	1.39	9.85
Bhiwani	0.00	0.00	0.49	2.71	3.20
Charkhi Dadri	0.00	0.00	0.26	0.29	0.55
Faridabad	0.00	0.04	8.00	50.12	58.16
Fatehabad	0.00	0.00	0.00	0.45	0.45
Gurugram	0.11	0.39	9.39	60.56	70.45
Hisar	0.00	0.06	0.08	6.07	6.21
Jhajjar	0.00	0.02	2.09	2.07	4.18
Jind	0.00	0.00	0.15	4.85	5.00
Kaithal	0.00	0.00	2.10	28.53	30.63
Karnal	0.00	0.00	0.12	4.41	4.53
Kurukshetra	0.00	0.02	2.08	18.32	20.42
Mahendragarh	0.00	0.77	9.16	20.82	30.75
Mewat	0.02	1.52	23.77	69.14	94.45
Palwal	0.00	0.00	0.15	1.49	1.64
Panchkula	11.32	234.29	29.00	0.83	275.44
Panipat	0.00	0.00	0.00	0.29	0.29
Rewari	0.01	0.68	14.43	21.50	36.62
Rohtak	0.00	0.01	1.22	0.91	2.14
Sirsa	0.00	0.00	0.00	0.11	0.11
Sonipat	0.00	0.00	0.00	0.00	0.00
Yamunanagar	0.74	66.94	48.73	18.31	134.72
Grand Total	12.57	308.78	155.27	313.17	789.79

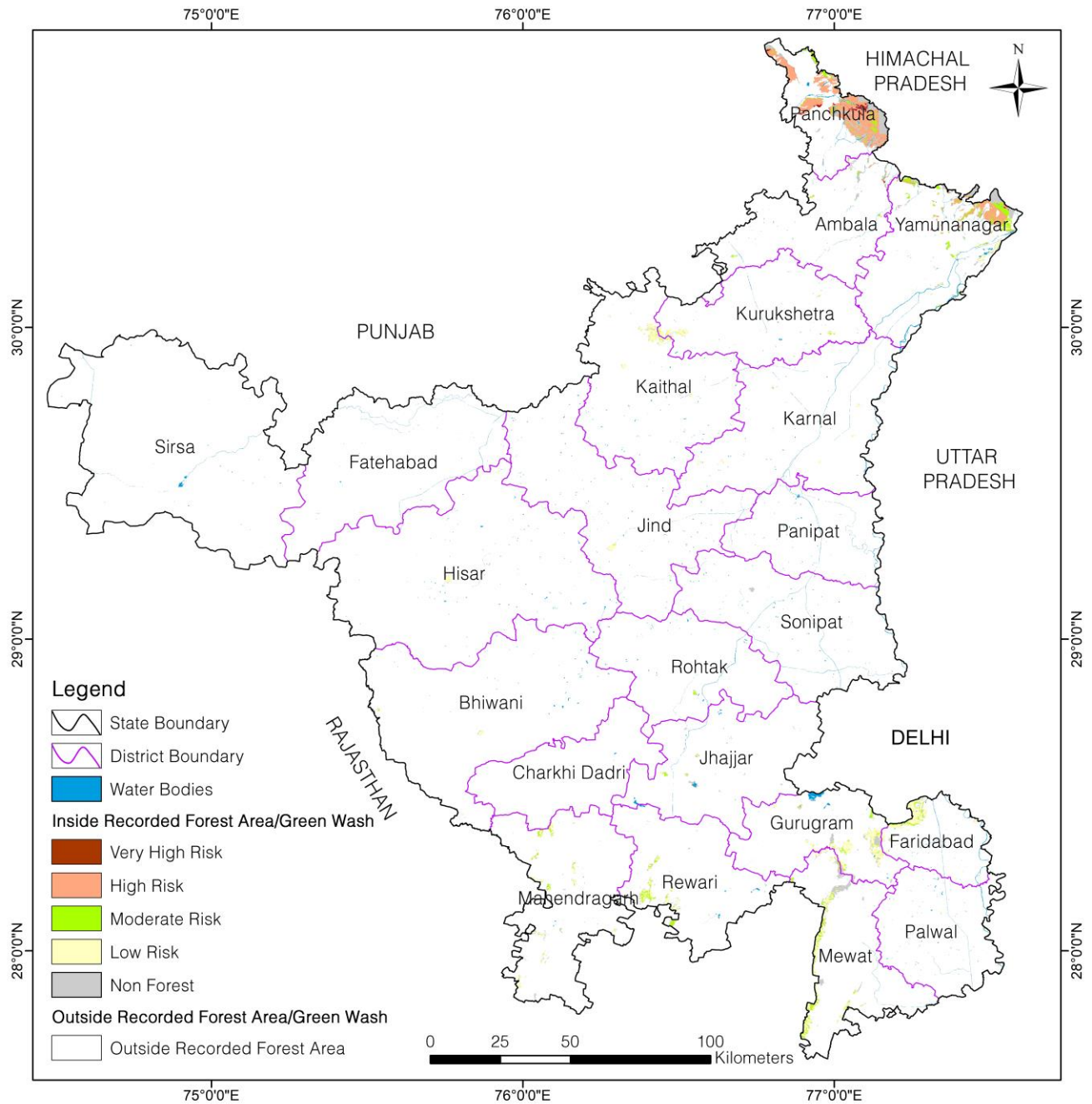


Figure 2.9 Forest fire risk zonation map of Haryana

Very high risk and high risk zones has been observed in Panchkula and Yamunanagar districts. Around 28.77% of the forest cover inside RFA falls under moderate to low fire risk zone.

2.10. Himachal Pradesh

Different forest fire risk zones inside GW is shown in the Table 2.10. From the table, it can be inferred that 0.79% of the total GW area falls under very high risk, 6.59% under high risk, 30.16% under moderate risk and 39.22% under low risk. Spatial distribution of forest fire risk zone map is shown in the map of the state in Figure 2.10.

Table 2.10 District-wise RFA/GW Area in different forest fire risk zone in Himachal Pradesh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Bilaspur	0.77	19.76	143.38	16.82	180.73
Chamba	13.78	137.77	454.30	1,198.24	1,804.09
Hamirpur	1.08	22.01	141.00	17.36	181.45
Kangra	28.16	156.81	815.90	441.70	1,442.57
Kinnaur	0.08	5.27	112.12	478.24	595.71
Kullu	2.81	27.10	359.75	1,204.47	1,594.13
Lahaul & Spiti	0.00	0.71	33.25	137.27	171.23
Mandi	9.16	166.75	571.53	413.71	1,161.15
Shimla	2.87	42.37	479.71	1,354.30	1,879.25
Sirmaur	17.24	167.30	645.33	166.00	995.87
Solan	33.24	140.87	267.04	42.01	483.16
Una	1.08	37.58	206.03	29.95	274.64
Total	110.27	924.30	4,229.34	5,500.07	10,763.98

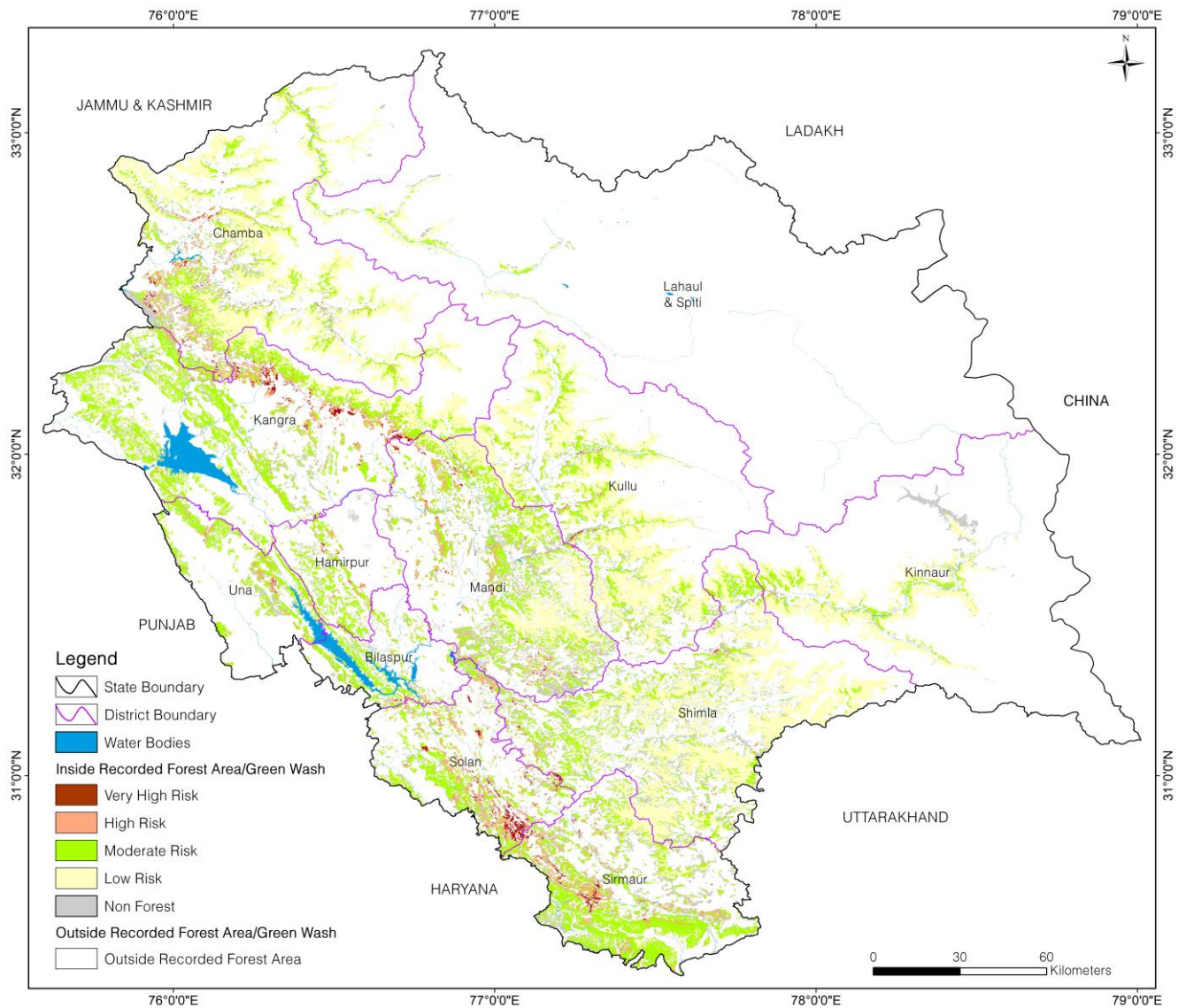


Figure 2.10 Forest fire risk zonation map of Himachal Pradesh

Very high fire risk and high fire risk zones has been observed in Chamba, Kangra, Solan and Sirmour districts. Around 39.22% of the forest cover inside GW falls under the low fire risk zone.

2.11. Jharkhand

Different forest fire risk zones inside RFA is shown in the Table 2.11. From the table, it can be inferred that 4.45% of the total RFA area falls under very high risk, 38.88% under high risk, 18.61% under moderate risk and 4.85% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.11.

Table 2.11 District-wise RFA/GW Area in different forest fire risk zone in Jharkhand

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Bokaro	11.49	227.08	144.93	36.13	419.63
Chatra	75.23	968.02	410.18	157.22	1,610.65
Deoghar	4.09	34.28	24.42	10.75	73.54
Dhanbad	9.51	74.45	30.48	9.57	124.01
Dumka	15.62	126.93	52.50	7.62	202.67
East Singhbhum	110.48	502.43	168.57	49.63	831.11
Garhwa	41.21	668.08	406.39	138.53	1,254.21
Giridih	33.07	322.27	167.37	43.86	566.57
Godda	2.81	19.45	5.81	2.67	30.74
Gumla	73.96	431.42	211.95	54.19	771.52
Hazaribagh	46.93	816.77	487.20	74.05	1,424.95
Jamtara	0.01	0.15	0.14	0.02	0.32
Khunti	29.57	132.47	69.57	17.16	248.77
Kodarma	16.23	250.87	147.27	23.60	437.97
Latehar	64.38	671.91	259.44	57.08	1,052.81
Lohardaga	53.57	214.43	68.00	14.86	350.86
Pakur	2.81	22.81	12.87	1.72	40.21
Palamu	24.22	458.27	307.28	108.86	898.63
Ramgarh	25.64	174.07	57.43	11.62	268.76
Ranchi	59.17	371.96	140.49	21.47	593.09
Sahibganj	5.37	23.14	6.17	2.26	36.94
Saraikela Kharsawan	46.55	161.00	65.89	14.85	288.29
Simdega	36.76	276.93	112.44	23.72	449.85
West Singhbhum	61.80	474.66	196.75	45.41	778.62
Total	850.48	7,423.85	3,553.54	926.85	12,754.72

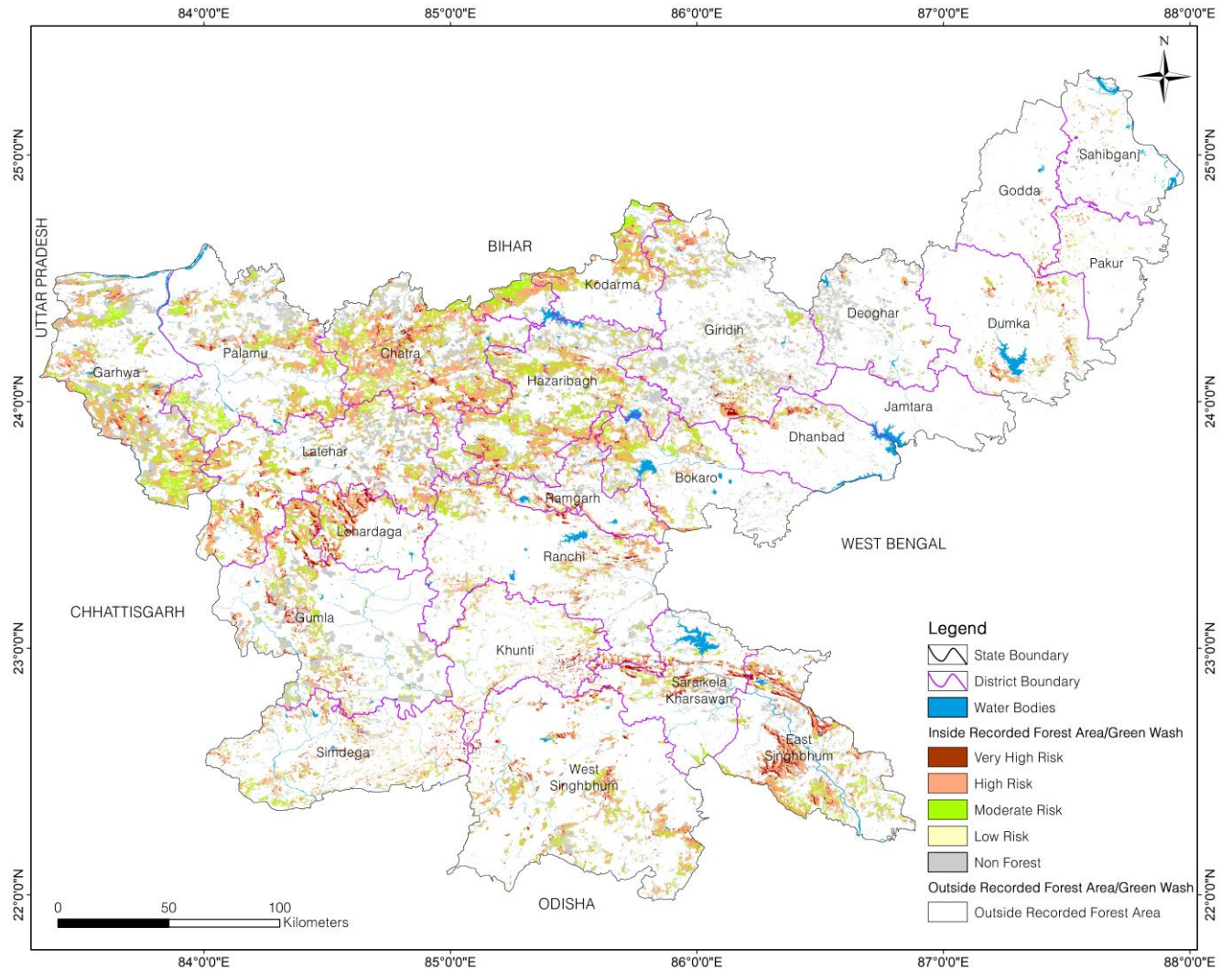


Figure 2.11 Forest fire risk zonation map of Jharkhand

Very high fire risk zones has been observed in East Singhbhum and Chitra districts. High fire risk and moderate fire risk zones covers 57.49 % of the forest cover inside RFA.

2.12. Karnataka

Different forest fire risk zones inside RFA is shown in the Table 2.12. From the table, it can be inferred that 2.90% of the total RFA area falls under very high risk, 24.29% under high risk, 24.21% under moderate risk and 31.87% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.12.

Table 2.12. District-wise RFA/GW Area in different forest fire risk zone in Karnataka
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Bagalkot	12.97	175.58	239.08	111.28	538.91
Ballari	106.64	469.69	259.97	116.01	952.31
Belagavi	35.66	397.72	542.64	391.09	1,367.11
Bengaluru	9.56	56.82	26.80	8.23	101.41
Bengaluru Rural	1.79	22.38	12.78	4.79	41.74
Bidar	1.01	29.36	29.24	10.89	70.50
Chamarajanagar	12.81	569.75	1,090.47	936.99	2,610.02
Chikkamagaluru	112.73	668.36	287.78	464.71	1,533.58
Chikballapura	42.36	170.31	46.90	12.12	271.69
Chitradurga	18.46	230.08	257.21	150.62	656.37
Dakshina Kannada	0.37	3.21	120.34	1,051.08	1,175.00
Davanagere	45.91	361.73	161.05	23.39	592.08
Dharwad	20.99	193.50	95.89	14.91	325.29
Gadag	22.00	158.25	29.78	9.42	219.45
Hassan	20.84	129.50	105.93	143.03	399.30
Haveri	20.63	220.04	94.61	18.30	353.58
Kalaburagi	6.49	81.45	66.20	16.88	171.02
Kodagu	10.78	181.75	332.74	849.28	1,374.55
Kolar	6.89	78.70	87.24	69.48	242.31
Koppal	2.36	40.03	24.44	7.28	74.11
Mandya	8.94	132.13	74.33	16.47	231.87
Mysuru	11.77	276.66	464.90	156.07	909.40
Raichur	1.04	35.84	47.72	8.40	93.00
Ramanagara	21.56	254.64	222.68	103.83	602.71
Shivamogga	181.48	924.84	384.70	409.90	1,900.92
Tumakuru	38.05	247.77	235.10	84.25	605.17
Udupi	0.19	3.94	89.35	734.35	827.83
Uttara Kannada	116.20	1,330.38	2,023.68	3,946.82	7,417.08
Vijayapura	0.00	1.03	2.72	4.28	8.03
Yadgir	8.71	92.50	56.35	16.70	174.26
Total	899.19	7,537.94	7,512.62	9,890.85	25,840.60

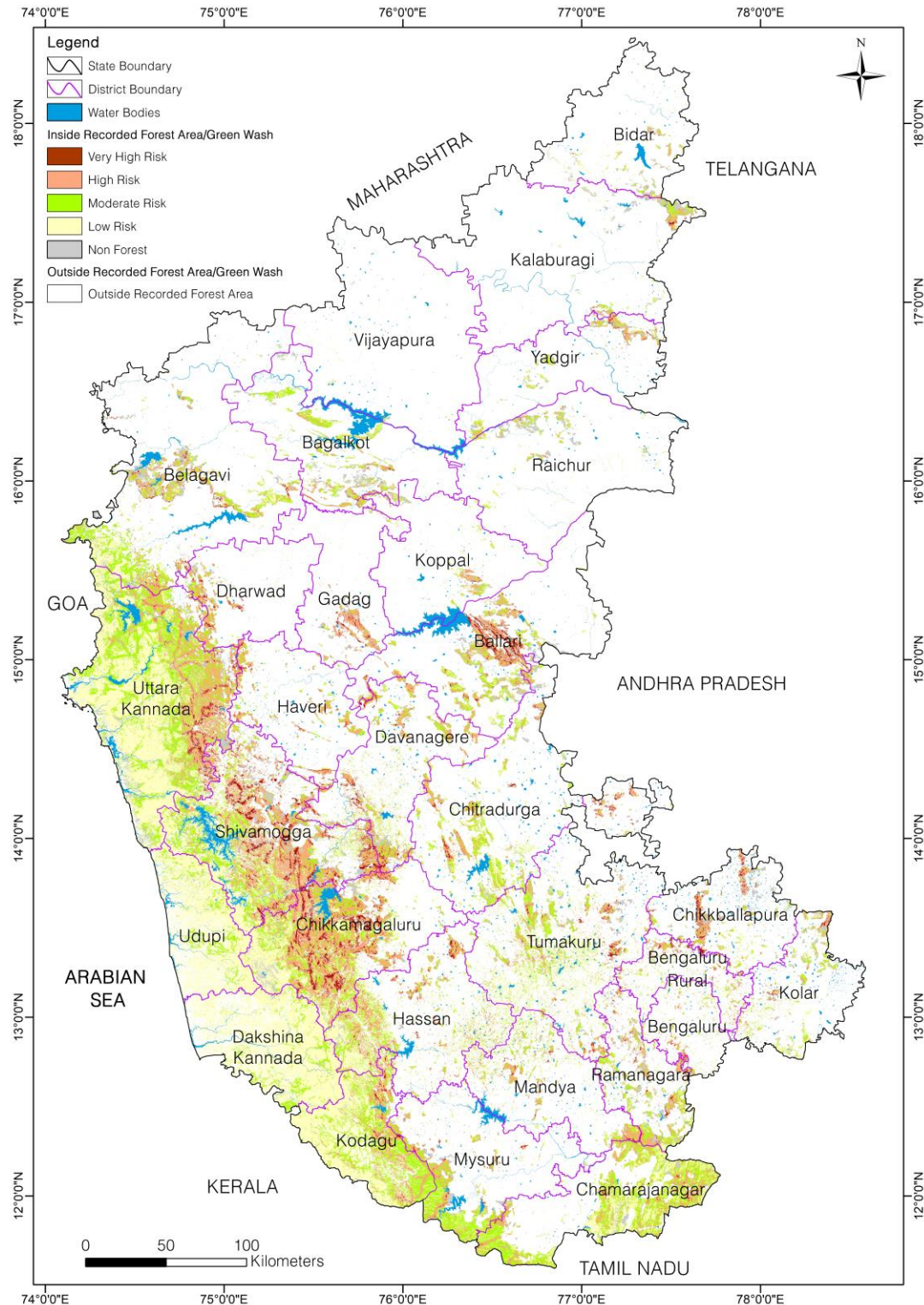


Figure 2.12. Forest fire risk zonation map of Karnataka

Very high fire risk and high fire risk zones has been observed in Shivamogga, Uttar Kanada and Chikkamagaluru districts. Around 51.40% of the forest cover inside RFA falls under very high to moderate fire risk zone.

2.13. Kerala

Different forest fire risk zones inside RFA is shown in the Table 2.13. From the table, it can be inferred that 0.07% of the total RFA area falls under very high risk, 7.60% under high risk, 24.42% under moderate risk and 53.98% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.13.

Table 2.13 District-wise RFA/GW Area in different forest fire risk zone in Kerala

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Alappuzha	0.00	0.00	0.00	0.00	0.00
Ernakulam	0.09	17.99	187.23	603.51	808.82
Idukki	5.26	439.05	767.53	1,103.12	2,314.96
Kannur	0.03	11.78	89.22	162.02	263.05
Kasargod	0.00	2.83	24.55	43.12	70.50
Kollam	0.00	8.66	188.56	593.42	790.64
Kottayam	0.00	0.88	24.48	36.27	61.63
Kozhikode	0.04	23.44	78.31	175.30	277.09
Malapuram	0.06	29.87	175.10	504.71	709.74
Palakkad	0.60	123.12	329.15	810.03	1,262.90
Pathanamthitta	0.00	59.86	295.39	1,003.43	1,358.68
Thiruvanthapuram	0.01	25.58	126.88	324.20	476.67
Thrissur	0.06	7.70	244.12	598.10	849.98
Waynad	1.41	127.93	291.23	280.64	701.21
Total	7.56	878.69	2,821.75	6,237.87	9,945.87

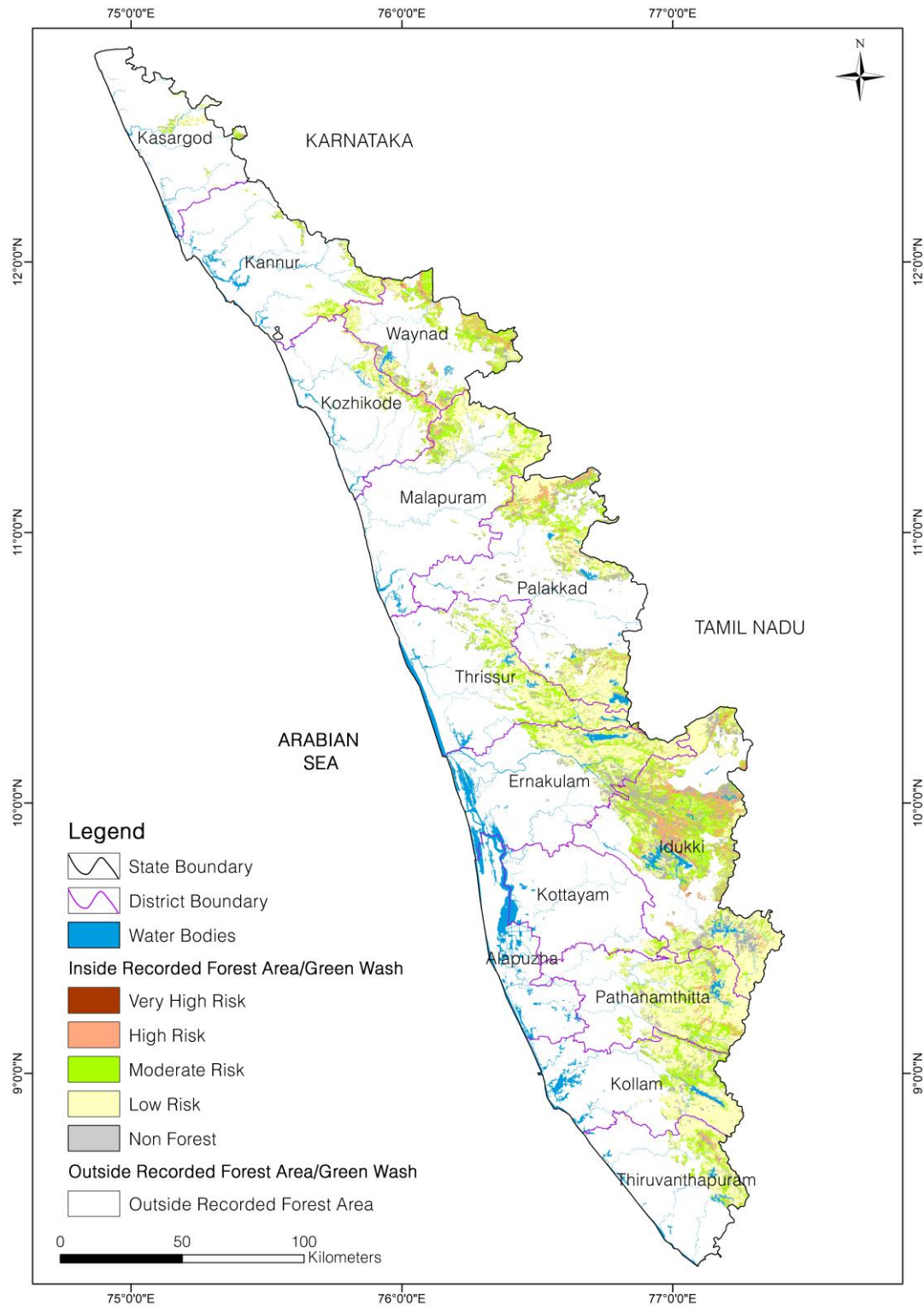


Figure 2.13 Forest fire risk zonation map of Kerala

High fire risk to moderate fire risk zones has been observed in Idukki, Palakkad and Waynad districts. Around 53.98% of the forest cover inside RFA falls under the low fire risk zone.

2.14. Madhya Pradesh

Different forest fire risk zones inside RFA is shown in the Table 2.14. From the table, it can be inferred that 2.76% of the total RFA area falls under very high risk, 31.12% under high risk, 31.22% under moderately risk and 9.88% under low risk. Spatial distribution of forest fire risk zone map is shown in the map of the state in Figure 2.14.

Table 2.14 District-wise RFA/GW Area in different forest fire risk zone in Madhya Pradesh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Agar Malwa	0.00	0.22	5.49	1.97	7.68
Alirajpur	11.42	191.92	165.39	222.23	590.96
Anuppur	111.87	336.14	160.16	56.45	664.62
Ashoknagar	7.79	166.72	337.52	121.14	633.17
Balaghat	199.57	2,321.99	1,497.36	370.22	4,389.14
Barwani	53.66	593.50	204.54	77.99	929.69
Betul	52.22	1,552.69	1,210.46	308.29	3,123.66
Bhind	0.00	3.15	19.18	60.70	83.03
Bhopal	0.50	66.76	148.43	48.09	263.78
Burhanpur	62.82	709.43	330.20	81.55	1,184.00
Chhatarpur	14.10	532.32	830.57	174.68	1,551.67
Chhindwara	176.82	1,872.18	1,209.66	389.05	3,647.71
Damoh	22.97	920.27	1,197.31	140.61	2,281.16
Datia	0.37	12.38	53.93	123.37	190.05
Dewas	5.83	667.79	957.14	193.63	1,824.39
Dhar	7.47	219.09	304.29	52.27	583.12
Dindori	41.97	975.51	745.14	197.46	1,960.08
Guna	9.60	454.68	668.10	167.23	1,299.61
Gwalior	7.40	182.39	424.48	519.59	1,133.86
Harda	5.38	439.70	369.83	82.54	897.45
Hoshangabad	64.46	988.75	922.50	237.46	2,213.17
Indore	17.94	210.48	286.29	36.97	551.68
Jabalpur	5.76	207.16	397.23	106.86	717.01
Jhabua	3.78	61.41	140.93	64.21	270.33
Katni	13.38	381.45	519.33	133.03	1,047.19
Khandwa (East Nimar)	24.95	888.15	844.21	264.38	2,021.69
Khargone (West Nimar)	29.07	660.31	449.48	120.35	1,259.21
Mandla	70.64	1,479.18	1,103.56	352.32	3,005.70
Mandsaur	9.18	84.90	154.11	55.38	303.57
Morena	0.50	158.44	244.82	240.84	644.60
Narsinghpur	43.45	545.91	499.59	120.73	1,209.68

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Neemuch	7.64	189.66	598.48	262.74	1,058.52
Niwari	1.85	18.67	51.23	23.20	94.95
Panna	50.31	1,068.97	1,424.31	169.94	2,713.53
Raisen	38.65	949.01	1,401.75	170.60	2,560.01
Rajgarh	0.90	33.64	82.03	17.48	134.05
Ratlam	0.60	23.12	69.17	20.65	113.54
Rewa	15.93	224.79	396.74	109.84	747.30
Sagar	25.03	706.29	1,332.46	258.49	2,322.27
Satna	45.14	772.12	782.10	100.49	1,699.85
Sehore	15.62	511.47	601.37	77.16	1,205.62
Seoni	16.66	1,028.97	1,143.58	403.89	2,593.10
Shahdol	231.12	967.79	273.94	67.50	1,540.35
Shajapur	0.00	0.00	0.00	0.00	0.00
Sheopur	20.31	635.95	1,435.59	1,258.63	3,350.48
Shivpuri	12.95	479.94	1,167.16	703.04	2,363.09
Sidhi	377.28	1,029.62	273.89	37.28	1,718.07
Singrauli	508.48	1,067.97	223.20	54.00	1,853.65
Tikamgarh	0.95	47.91	151.02	68.10	267.98
Ujjain	0.00	1.03	7.07	2.75	10.85
Umaria	114.87	1,008.38	709.35	131.82	1,964.42
Vidisha	4.83	223.01	435.33	104.71	767.88
Total	2,563.99	28,873.28	28,961.00	9,163.90	69,562.17

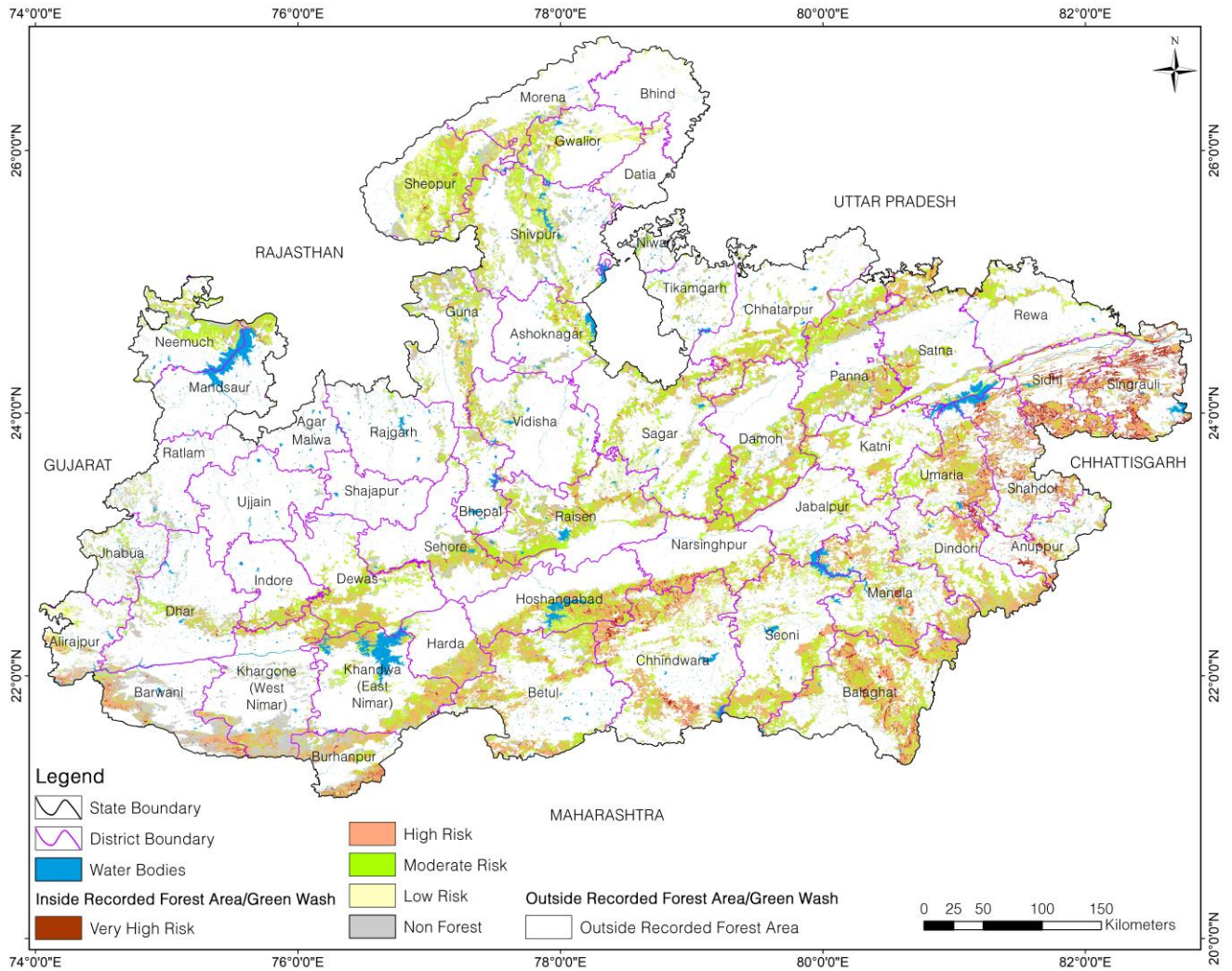


Figure 2.14. Forest fire risk zonation map of Madhya Pradesh

Very high fire risk to high fire risk zones has been observed in Singrauli, Sidhi, Shahdol, Umaria, Balaghat, Mandla, Chhindwara, Barwani, Khargone (West Nimar), Burhanpur and Hoshangabad districts. Around 62.34% of the forest cover inside RFA falls under the high fire risk zone to moderate fire risk zone class.

2.15. Maharashtra

Different forest fire risk zones inside RFA is shown in the Table 2.15. From the table, it can be inferred that 1.56% of the total RFA area falls under very high risk, 25.22% under high risk, 24.72% under moderate risk and 13.64% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.15.

Table 2.15 District-wise RFA/GW Area in different forest fire risk zone in Maharashtra
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ahmednagar	17.90	161.42	186.16	142.66	508.14
Akola	6.21	124.38	101.96	37.33	269.88
Amravati	103.16	1,503.88	1,163.90	312.94	3,083.88
Aurangabad	24.31	259.14	156.66	57.84	497.95
Beed	16.93	419.53	408.69	115.23	960.38
Bhandara	1.87	42.33	53.39	31.64	129.23
Buldhana	23.46	315.81	188.45	93.80	621.52
Chandrapur	76.09	1,628.94	1,655.80	377.10	3,737.93
Dhule	8.97	112.19	129.25	92.43	342.84
Gadchiroli	234.46	4,520.04	3,632.94	1,426.84	9,814.28
Gondia	67.30	966.53	554.87	108.26	1,696.96
Hingoli	1.94	24.66	27.85	20.94	75.39
Jalgaon	53.45	567.89	320.10	136.28	1,077.72
Jalna	1.27	8.01	12.63	8.62	30.53
Kolhapur	2.85	133.16	556.23	644.72	1,336.96
Latur	0.01	1.25	4.79	6.82	12.87
Mumbai city	0.00	0.00	0.00	2.21	2.21
Mumbai Suburban	0.00	0.00	7.32	64.82	72.14
Nagpur	23.82	850.66	742.22	154.28	1,770.98
Nanded	36.35	404.52	280.44	87.66	808.97
Nandurbar	119.56	611.45	212.93	150.14	1,094.08
Nashik	10.62	236.47	518.77	259.11	1,024.97
Osmanabad	0.23	11.64	13.44	11.69	37.00
Palghar	0.00	24.82	517.66	516.61	1,059.09
Parbhani	2.22	15.80	6.35	3.47	27.84
Pune	9.70	201.92	433.34	323.59	968.55
Raigad	0.32	21.50	294.93	686.58	1,003.33
Ratnagiri	0.00	2.47	18.25	27.61	48.33
Sangli	2.35	38.58	62.00	118.39	221.32
Satara	16.21	199.02	310.13	469.91	995.27
Sindhudurg	0.04	10.48	89.98	324.34	424.84
Solapur	0.13	16.89	20.27	19.53	56.82
Thane	0.39	20.10	294.68	523.84	839.01
Wardha	1.73	247.72	324.36	105.94	679.75
Washim	0.69	88.35	103.17	30.47	222.68
Yavatmal	38.31	764.25	863.00	382.53	2,048.09
Total	902.85	14,555.80	14,266.91	7,876.17	37,601.73

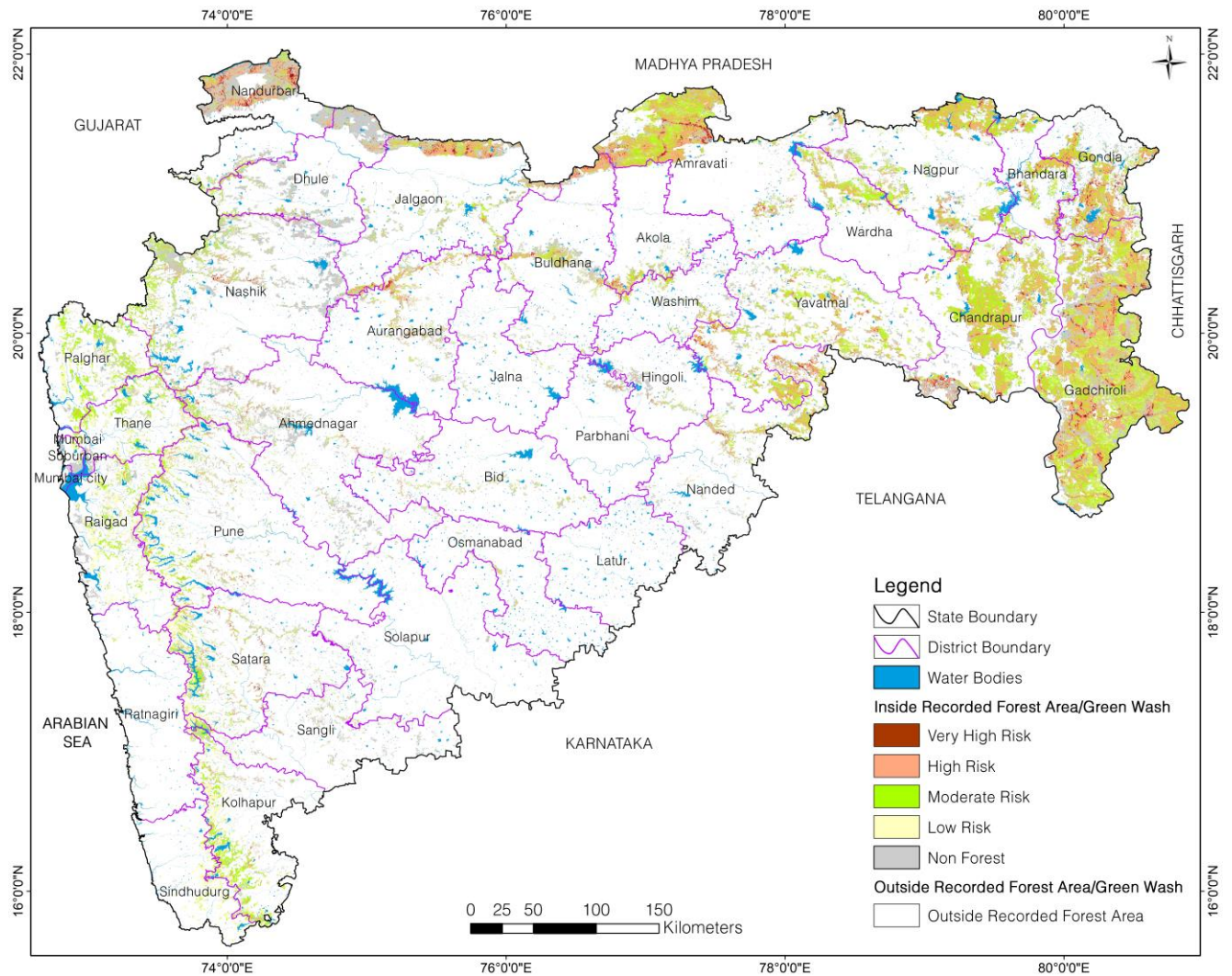


Figure 2.15 Forest fire risk zonation map of Maharashtra

High fire risk to moderate fire risk zones has been observed in Gadchiroli, Gondia, Amravati, Akloa and Nandurbar districts. Around 49.97% of the forest cover inside RFA falls under the high fire risk to moderate fire risk zone. Gadchiroli district has the largest RFA under forest fire risk zone.

5.16. Manipur

Different forest fire risk zones inside GW is shown in the Table 2.16. From the table, it can be inferred that 9.60% of the total GW area falls under very high risk, 31.37% under high risk, 31.54% under moderate risk and 16.13% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.16.

Table 2.16 District-wise RFA/GW Area in different forest fire risk zone in Manipur

District	Forest Fire Risk Zone				Area in km ²
	Very High	High	Moderate	Low	Total
Bishnupur	0.51	3.93	3.71	1.15	9.30
Chandel	60.90	588.25	851.82	272.80	1,773.77
Churachandpur	224.71	776.78	690.54	239.72	1,931.75
Imphal East	2.99	9.43	7.64	4.26	24.32
Imphal West	0.42	3.37	4.59	2.99	11.37
Jiribam	16.74	40.47	26.36	12.66	96.23
Kakching	1.36	3.82	1.92	0.60	7.70
Kamjong	187.83	570.93	567.69	280.46	1,606.91
Kangpokpi	107.55	265.97	196.53	158.09	728.14
Noney	96.50	382.16	417.92	188.99	1,085.57
Pherzawl	169.04	710.27	811.87	360.48	2,051.66
Senapati	168.95	447.01	391.99	372.23	1,380.18
Tamenglong	303.84	1,010.03	896.31	518.90	2,729.08
Tengnoupal	39.15	166.29	315.44	126.30	647.18
Thoubal	0.00	0.01	0.00	0.00	0.01
Ukhrul	297.47	504.53	327.39	279.50	1,408.89
Total	1,677.96	5,483.25	5,511.72	2,819.13	15,492.06

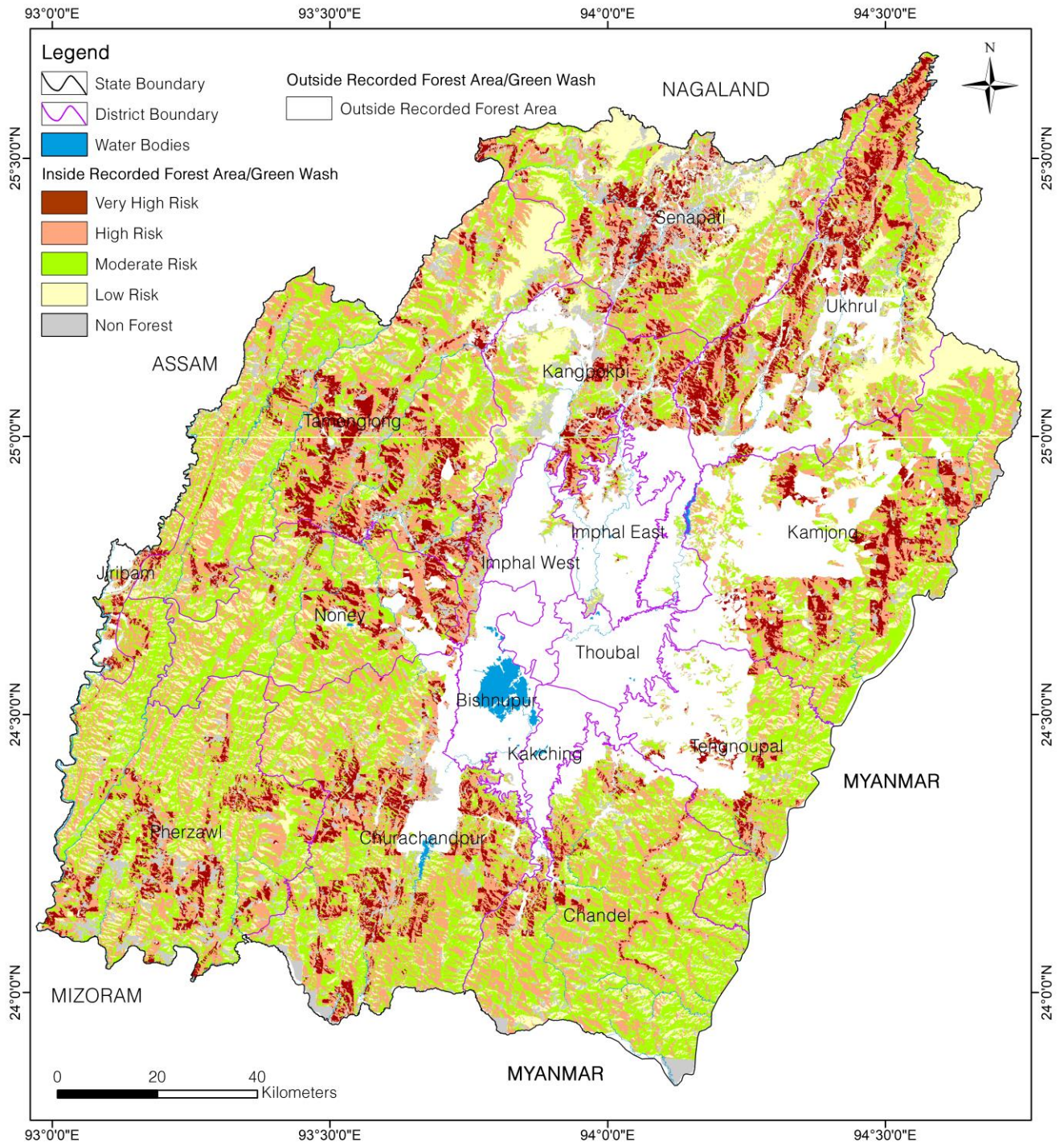


Figure 2.16 Forest fire risk zonation map of Manipur

Very high fire risk and high fire risk zones has been observed in Ukhrul, Tamenglong and Senapati districts. Around 72.51% of the forest cover inside GW falls under the very high fire risk to moderate fire risk zone.

2.17. Meghalaya

Different forest fire risk zones inside GW is shown in the Table 2.17. From the table, it can be inferred that 8.97% of the total GW area falls under very high risk, 30.82% under high risk, 26.49% under moderate risk and 20.72% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.17.

Table 2.17 District-wise RFA/GW Area in different forest fire risk zone in Meghalaya
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
East Garo Hills	156.51	473.10	390.26	314.22	1,334.09
East Jaintia Hills	112.72	316.72	300.97	588.19	1,318.60
East Khasi Hills	146.59	426.19	314.86	260.94	1,148.58
Eastern West Khasi Hills	81.71	216.51	179.50	80.14	557.86
North Garo Hills	86.12	407.45	417.76	196.56	1,107.89
Ri-Bhoi	178.33	837.68	699.93	156.75	1,872.69
South Garo Hills	99.37	416.03	439.29	575.20	1,529.89
South West Garo Hills	44.96	233.36	193.17	128.88	600.37
South West Khasi Hills	44.61	181.00	170.91	406.79	803.31
West Garo Hills	195.15	853.02	698.22	398.24	2,144.63
West Jaintia Hills	154.16	388.00	251.30	121.58	915.04
West Khasi Hills	268.50	641.67	576.45	396.94	1,883.56
Total	1,568.73	5,390.73	4,632.62	3,624.43	15,216.51

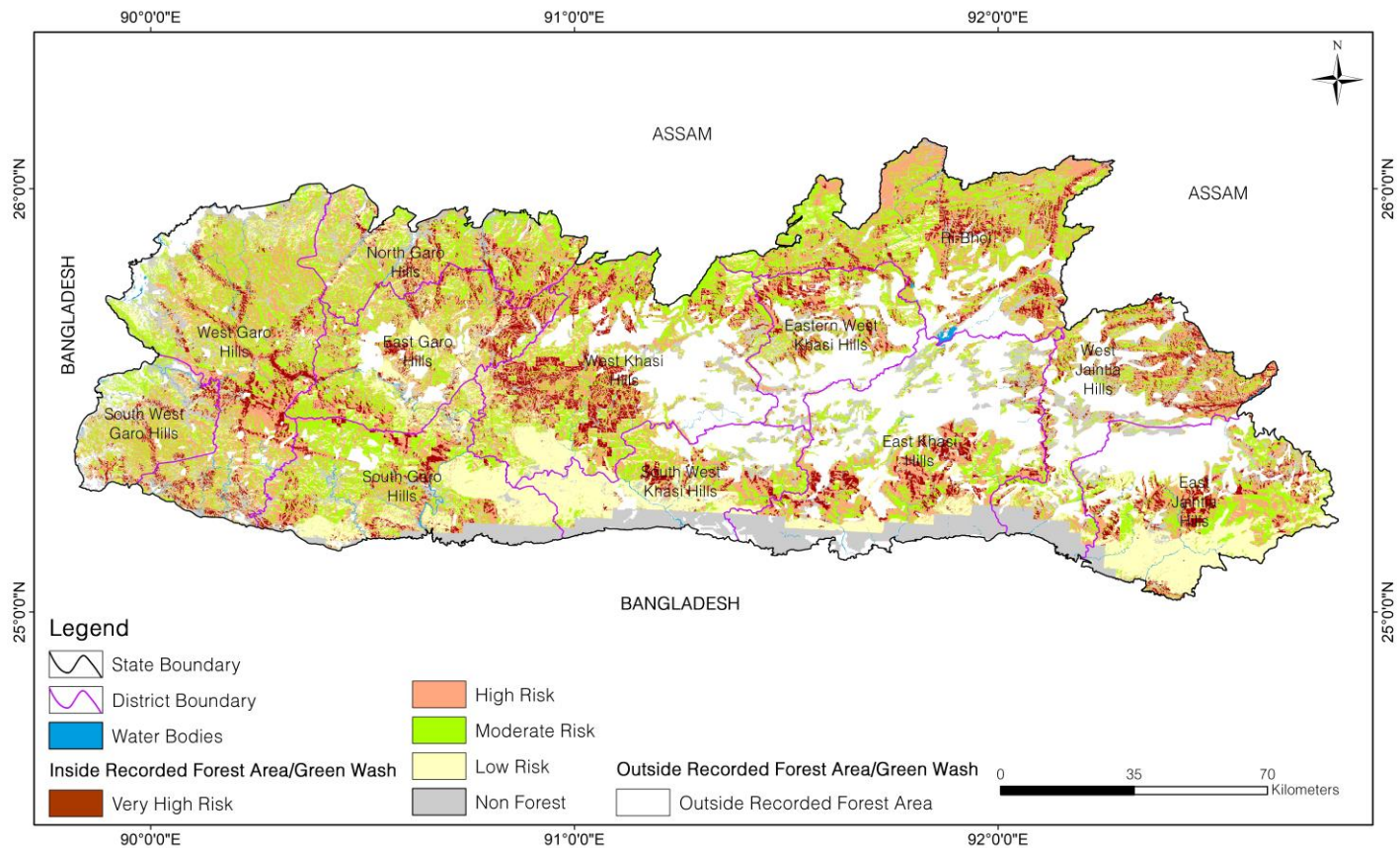


Figure 2.17 Forest fire risk zonation map of Meghalaya

Very high fire risk and high fire risk zones has been observed in almost all the districts of the state. Around 39.79% of the forest cover inside RFA falls under very high to high fire risk zone.

2.18. Mizoram

Different forest fire risk zones inside GW is shown in the Table 2.18. From the table, it can be inferred that 16.77% of the total GW area falls under very high risk, 35.23% under high risk, 26.44% under moderate risk and 8.73% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.18.

Table 2.18 District-wise RFA/GW Area in different forest fire risk zone in Mizoram

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Aizawl	354.15	820.13	612.77	199.96	1,987.01
Champhai	290.51	494.86	289.23	101.79	1,176.39
Hnahthial	142.52	287.58	216.44	79.38	725.92
Khawzawl	244.30	351.83	164.28	64.92	825.33
Kolasib	207.62	545.67	459.18	123.50	1,335.97
Lawngtlai	430.52	791.51	451.39	136.33	1,809.75
Lunglei	488.61	1,263.29	1,209.27	408.71	3,369.88
Mamit	357.48	1,059.96	1,027.95	323.32	2,768.71
Saitual	330.10	573.17	358.99	128.24	1,390.50
Serchhip	193.45	506.24	375.79	148.73	1,224.21
Siaha	409.53	553.59	273.11	81.19	1,317.42
Total	3,448.79	7,247.83	5,438.40	1,796.07	17,931.09

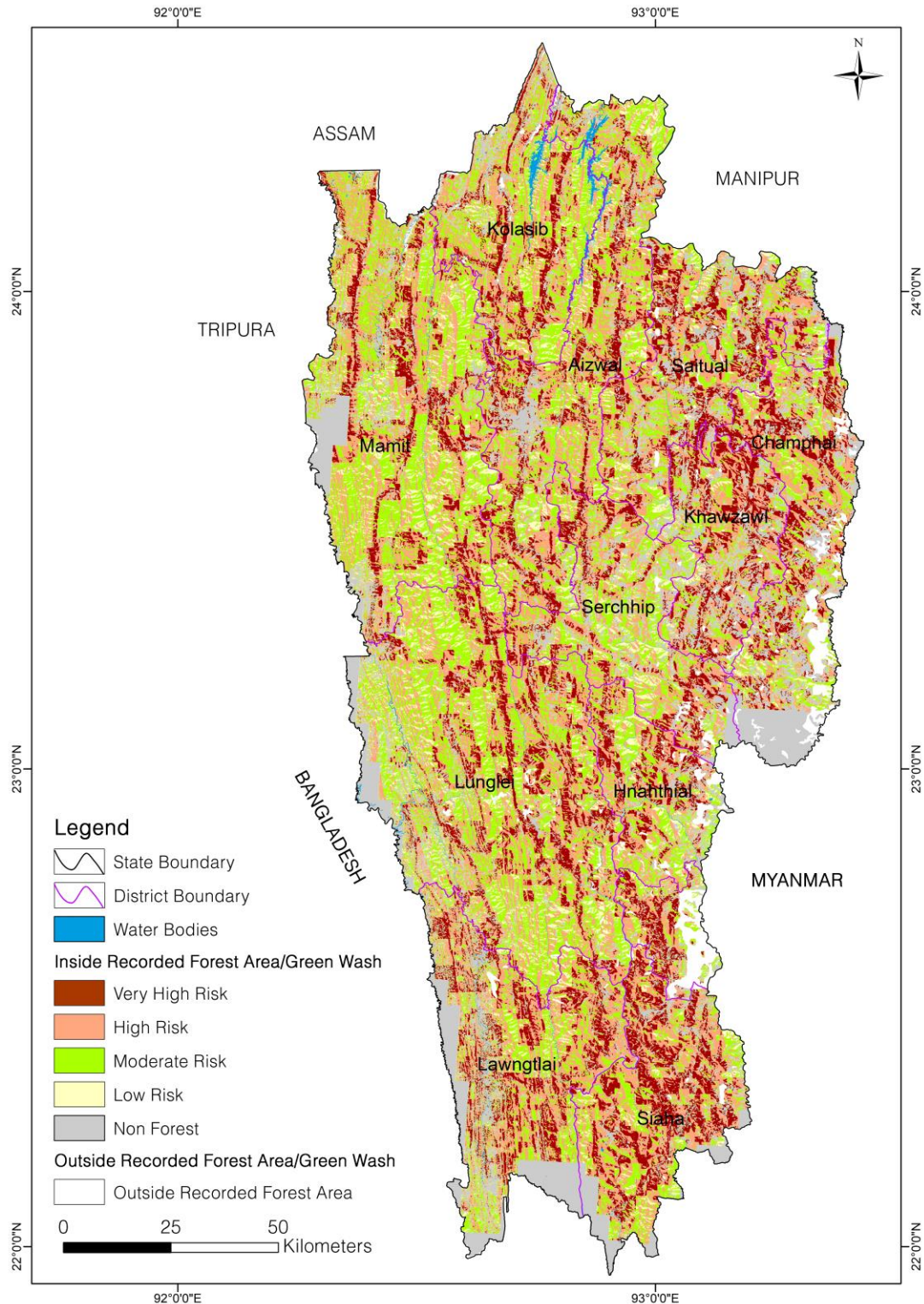


Figure 2.18 Forest fire risk zonation map of Mizoram

Very high fire risk to moderate fire risk zone comprises of 78.44% of the forest cover inside GW and observed in almost all the districts of the state.

2.19. Nagaland

Different forest fire risk zones inside GW is shown in the Table 2.19. From the table, it can be inferred that 7.70% of the total GW area falls under very high risk, 23.38% under high risk, 27.18% under moderate risk and 25.21% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.19.

Table 2.19 District-wise RFA/GW Area in different forest fire risk zone in Nagaland
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Dimapur	37.29	151.02	155.56	72.79	416.66
Kiphire	23.12	86.24	85.89	220.36	415.61
Kohima	160.03	376.56	299.86	239.16	1,075.61
Longleng	11.67	69.96	106.83	79.92	268.38
Mokokchung	16.49	83.95	185.62	71.28	357.34
Mon	38.86	239.08	357.72	342.73	978.39
Peren	196.86	471.40	551.77	313.95	1,533.98
Phek	157.58	371.68	330.59	446.32	1,306.17
Tuensang	21.73	150.81	167.77	517.66	857.97
Wokha	59.47	266.83	451.03	193.64	970.97
Zunheboto	94.01	213.74	191.67	176.91	676.33
Total	817.11	2,481.27	2,884.31	2,674.72	8,857.41

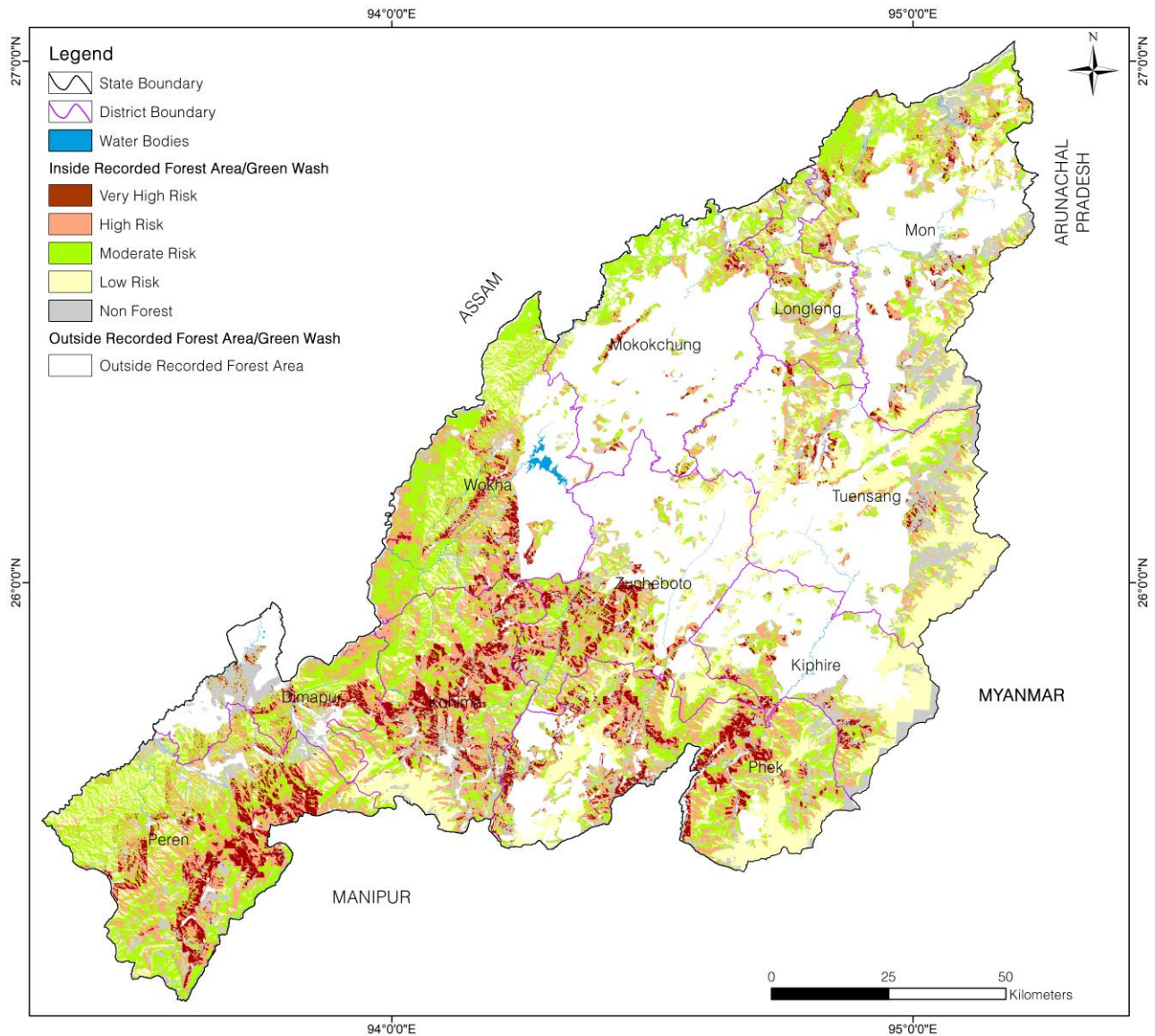


Figure 2.19 Forest fire risk zonation map of Nagaland

Very high fire risk and high fire risk zones has been observed in Phek, Peren and Kohima districts. Around 50.56% of the forest cover inside GW falls under the high fire risk to moderate fire risk zone.

2.20. Odisha

Different forest fire risk zones inside RFA is shown in the Table 2.20. From the table, it can be inferred that 6.48% of the total RFA area falls under very high risk, 44.35% under high risk, 19.21% under moderate risk and 11.92% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.20.

Table 2.20 District-wise RFA/GW Area in different forest fire risk zone in Odisha

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Angul	285.69	1,389.16	292.98	37.79	2,005.62
Balangir	55.64	508.30	237.71	63.00	864.65
Baleswar	6.85	84.85	59.52	88.90	240.12
Bargarh	82.90	505.89	174.86	29.15	792.80
Bhadrak	0.05	0.02	0.00	5.09	5.16
Boudh	53.49	301.19	252.03	261.03	867.74
Cuttack	56.05	268.21	129.50	98.75	552.51
Deogarh	178.79	777.31	100.69	11.01	1,067.80
Dhenkanal	78.03	631.40	208.47	62.21	980.11
Gajapati	44.66	590.53	552.84	322.37	1,510.40
Ganjam	39.32	399.34	666.05	814.13	1,918.84
Jagatsinghpur	0.00	0.00	0.03	16.72	16.75
Jajpur	32.85	119.77	34.23	19.16	206.01
Jharsuguda	6.84	154.52	39.68	6.08	207.12
Kalahandi	254.56	1,229.46	337.69	147.83	1,969.54
Kandhamal	250.24	1,322.44	1,028.84	756.13	3,357.65
Kendrapara	0.06	0.00	0.01	20.21	20.28
Kendujhar	235.72	1,448.02	386.21	82.62	2,152.57
Khordha	3.88	33.31	68.97	232.58	338.74
Koraput	57.61	643.48	330.04	221.10	1,252.23
Malkangiri	125.18	634.52	174.13	156.02	1,089.85
Mayurbhanj	206.42	1,759.58	478.47	272.70	2,717.17
Nabarangpur	27.70	474.64	228.88	63.47	794.69
Nayagarh	11.44	231.18	356.67	575.50	1,174.79
Nuapada	86.58	623.84	261.93	64.70	1,037.05
Puri	0.03	0.00	0.07	59.43	59.53
Rayagada	86.42	816.23	653.25	390.16	1,946.06
Sambalpur	237.55	1,609.52	435.26	59.00	2,341.33
Subarnapur	10.20	161.77	88.21	14.78	274.96
Sundargarh	233.93	2,097.95	574.63	106.65	3,013.16
Total	2,748.68	18,816.43	8,151.85	5,058.27	34,775.23

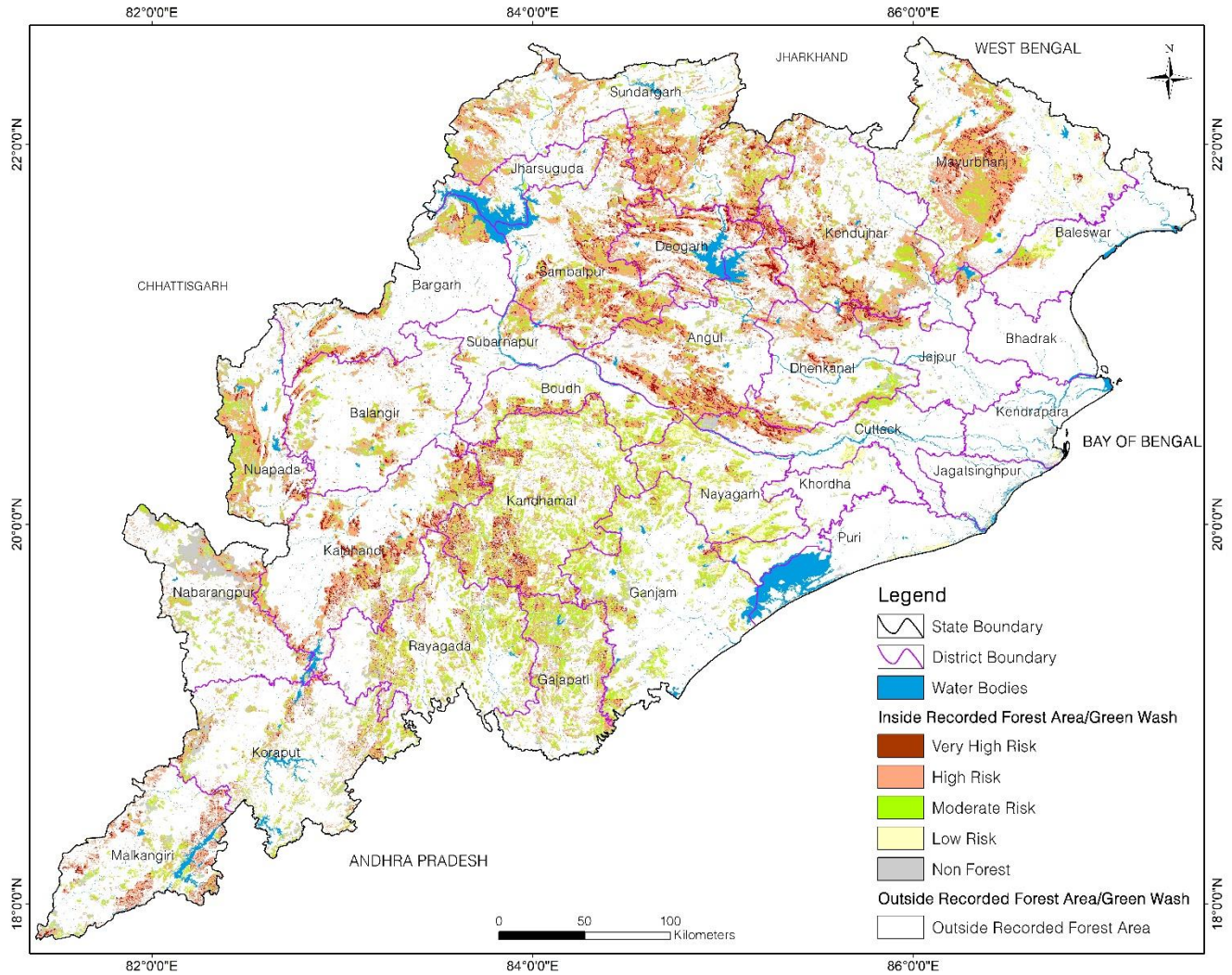


Figure 2.20. Forest fire risk zonation map of Odisha

Very high fire risk to high fire risk zones has been observed in Mayurbhanj, Kalahandi, Sambalpur, Angul, Deogarh and Sundargarh districts. Around 50.83% of the forest cover inside RFA falls under the very high fire risk and high fire risk zone.

2.21. Punjab

Different forest fire risk zones inside GW is shown in the Table 2.21. From the table, it can be inferred that 1.16% of the total GW area falls under very high risk, 24.78% under high risk, 33.13% under moderate risk and 25.87% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in 2.21.

Table 2.21 District-wise RFA/GW Area in different forest fire risk zone in Punjab

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Amritsar	0.00	0.00	0.06	0.19	0.25
Barnala	0.00	0.23	1.74	0.77	2.74
Bathinda	0.00	0.11	2.87	15.36	18.34
Faridkot	0.00	0.17	2.17	0.36	2.70
Fatehgarh Sahib	0.00	0.00	0.06	0.00	0.06
Fazilka	0.00	0.00	0.00	0.00	0.00
Firozpur	0.00	0.00	0.00	0.55	0.55
Gurdaspur	0.00	0.00	0.13	0.32	0.45
Hoshiarpur	0.00	3.61	169.73	76.33	249.67
Jalandhar	0.00	0.02	1.11	0.25	1.38
Kapurthala	0.00	0.00	1.93	1.74	3.67
Ludhiana	0.00	0.00	0.66	22.02	22.68
Mansa	0.00	0.00	0.04	0.09	0.13
Moga	0.00	0.00	0.00	0.77	0.77
Muktsar	0.00	0.00	0.00	0.00	0.00
Pathankot	0.00	0.09	4.38	0.42	4.89
Patiala	0.00	0.66	16.12	84.04	100.82
Rupnagar	2.26	55.42	17.04	2.89	77.61
Sangrur	0.47	3.81	80.29	20.87	105.44
SAS Nagar	0.00	0.00	0.08	4.02	4.10
SBS Nagar	7.97	164.84	6.59	2.43	181.83
Tarn Taran	0.00	0.00	1.11	5.64	6.75
Total	10.70	228.96	306.11	239.06	784.83

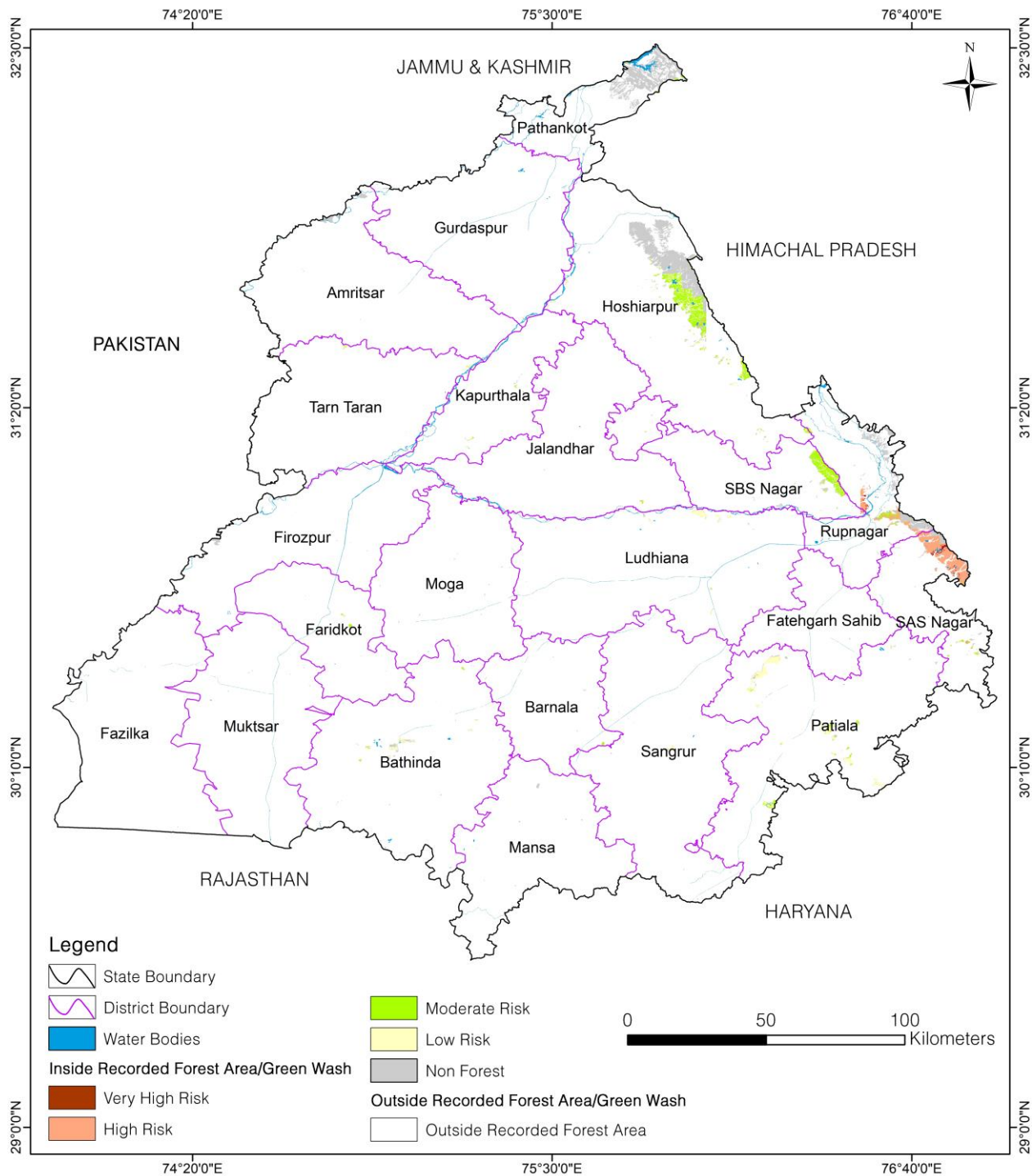


Figure 2.21 Forest fire risk zonation map of Punjab

Very high fire risk and high fire risk zones has been observed in SAS Nagar, Hoshirapur and Pathankot districts. Around 33.13% of the forest cover inside GW falls under the moderate risk.

2.22. Rajasthan

Different forest fire risk zones inside RFA is shown in the Table 2.22. From the table, it can be inferred that 0.68% of the total RFA area falls under very high risk, 9.98% under high risk, 19.37% under moderate risk and 13.20% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.22.

Table 2.22 District-wise RFA/GW Area in different forest fire risk zone in Rajasthan
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ajmer	0.00	9.68	57.78	280.45	347.91
Alwar	9.72	147.20	365.78	436.77	959.47
Banswara	17.00	153.63	131.55	12.46	314.64
Baran	15.20	233.72	515.83	273.73	1,038.48
Barmer	0.00	5.95	31.98	130.92	168.85
Bharatpur	0.01	6.77	36.94	64.67	108.39
Bhilwara	2.35	41.96	123.53	143.91	311.75
Bikaner	0.10	24.87	41.64	9.06	75.67
Bundi	8.19	106.79	201.07	116.32	432.37
Chittaurgarh	10.62	185.88	458.54	232.42	887.46
Churu	0.00	0.91	10.17	26.45	37.53
Dausa	0.14	8.31	53.33	112.88	174.66
Dholpur	10.58	108.44	181.04	100.26	400.32
Dungarpur	17.37	155.74	115.36	18.67	307.14
Hanumangarh	0.00	4.04	15.52	8.57	28.13
Jaipur	11.63	154.15	305.96	249.97	721.71
Jaisalmer	0.00	1.11	6.66	9.31	17.08
Jalor	0.00	1.95	43.89	162.34	208.18
Jhalawar	4.27	80.54	180.62	180.75	446.18
Jhunjhun	0.01	8.15	109.00	226.76	343.92
Jodhpur	0.00	0.74	11.10	26.83	38.67
Karauli	6.66	113.53	379.99	366.23	866.41
Kota	5.46	72.99	224.45	172.89	475.79
Nagaur	0.00	0.54	11.16	132.61	144.31
Pali	7.58	129.53	261.55	80.55	479.21
Pratapgarh	25.17	496.67	547.10	46.33	1,115.27
Rajsamand	1.58	52.27	169.08	40.51	263.44
Sawai Madhopur	2.88	35.08	195.59	277.13	510.68
Shriganga Nagar	0.00	2.47	10.00	3.71	16.18
Sikar	0.01	12.22	90.82	275.63	378.68
Sirohi	16.06	212.10	464.84	327.59	1,020.59
Tonk	4.35	35.50	68.26	64.32	172.43
Udaipur	66.46	985.61	1,546.65	137.26	2,735.98
Total	243.40	3,589.04	6,966.78	4,748.26	15,547.48

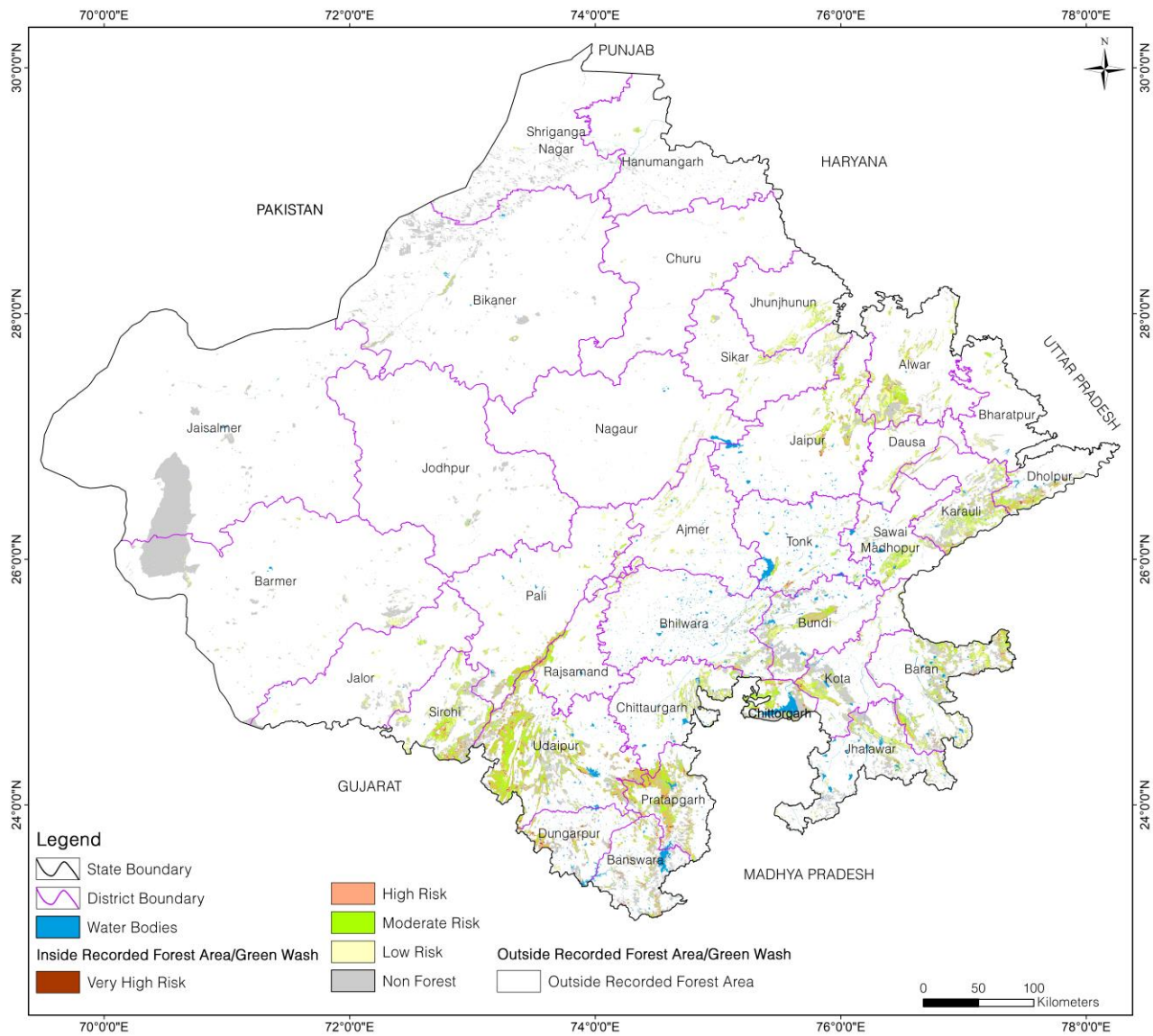


Figure 2.22 Forest fire risk zonation map of Rajasthan

High fire risk to moderate fire risk zones has been observed in Udaipur, Pratapgarh and Sirohi districts. Around 32.57% of the forest cover inside RFA falls under moderate to low risk zone.

2.23. Sikkim

Different forest fire risk zones inside RFA is shown in the Table 2.23. From the table, it can be inferred that 0.01% of the total RFA area falls under high risk, 0.35% under moderate risk and 41.40% under low risk. No forest cover inside RFA has been observed in the very high fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.23.

Table 2.23 District-wise RFA/GW Area in different forest fire risk zone in Sikkim

Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
East Sikkim	0.00	0.00	0.06	346.97	347.03
North Sikkim	0.00	0.00	0.79	1,241.61	1,242.40
South Sikkim	0.00	0.34	10.98	280.77	292.09
West Sikkim	0.00	0.24	7.04	372.43	379.71
Total	0.00	0.58	18.87	2,241.78	2,261.23

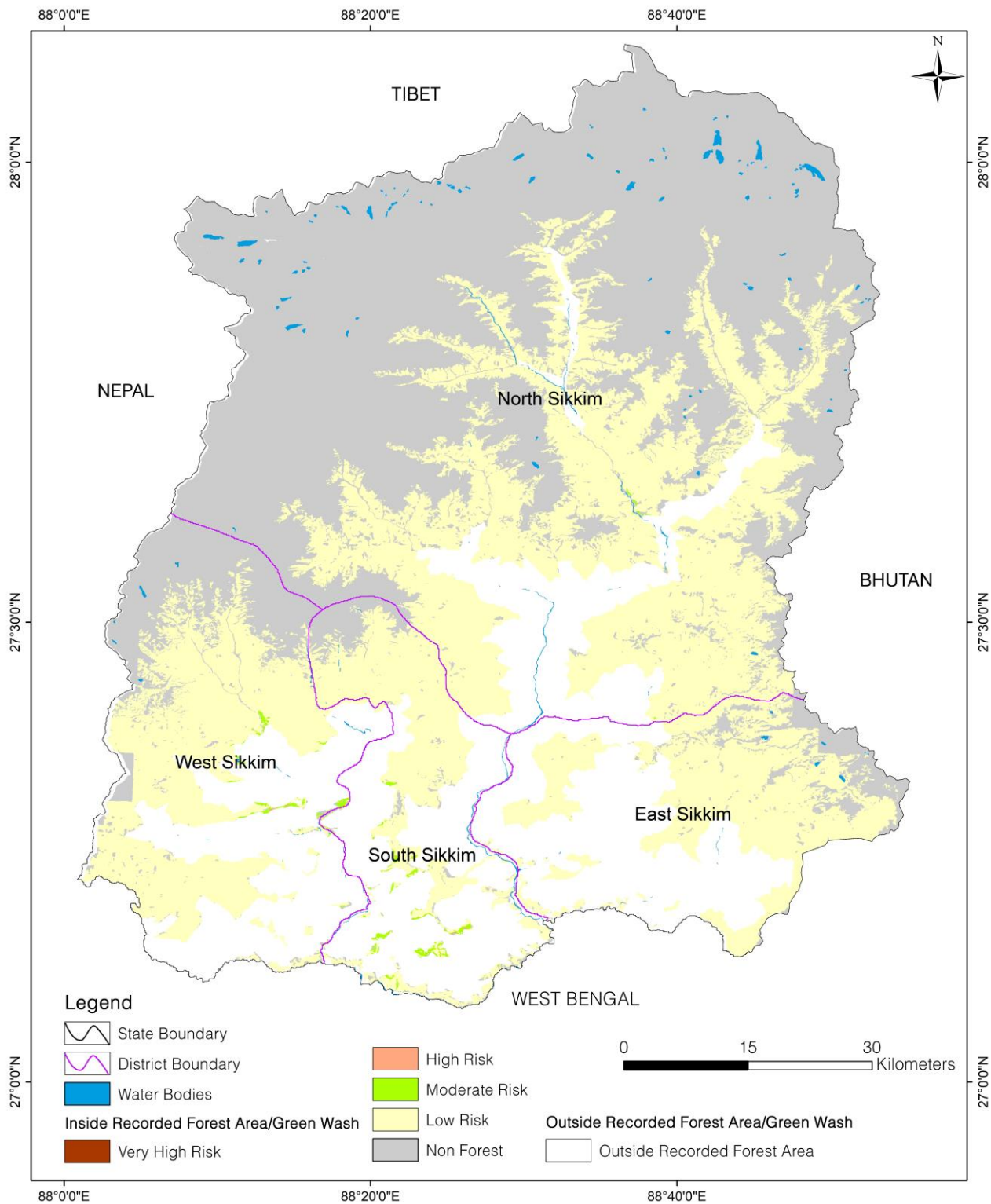


Figure 2.23 Forest fire risk zonation map of Sikkim

Around 41.40% of the forest cover inside RFA falls under the low fire risk zone.

2.24. Tamil Nadu

Different forest fire risk zones inside RFA is shown in the Table 2.24. From the table, it can be inferred that 0.43% of the total RFA area falls under very high risk, 12.52% under high risk, 22.10% under moderate risk and 49.20% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.24.

Table 2.24 District-wise RFA/GW Area in different forest fire risk zone in Tamil Nadu
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ariyalur	0.00	0.17	5.96	54.22	60.35
Chengalpattu	0.04	7.13	28.38	90.33	125.88
Chennai	0.00	0.00	0.43	2.51	2.94
Coimbatore	4.44	177.73	298.62	484.26	965.05
Cuddalore	0.00	0.09	5.54	60.28	65.91
Dharmapuri	4.99	214.89	428.91	808.63	1,457.42
Dindigul	30.09	251.69	439.49	707.48	1,428.75
Erode	6.74	281.09	511.50	1,345.73	2,145.06
Kallakurichi	3.16	87.60	165.87	301.70	558.33
Kancheepuram	0.00	0.44	3.86	15.35	19.65
Kanniyakumari	0.13	76.14	84.18	275.69	436.14
Karur	0.00	2.08	6.50	40.68	49.26
Krishnagiri	3.36	155.25	314.72	702.40	1,175.73
Madurai	0.68	65.88	108.93	328.26	503.75
Mayiladuthurai	0.00	0.00	0.02	0.07	0.09
Nagapattinam	0.00	0.00	0.00	0.38	0.38
Namakkal	5.60	118.06	132.61	144.64	400.91
Perambalur	1.21	21.78	34.23	79.16	136.38
Pudukkottai	0.02	4.15	26.56	105.84	136.57
Ramanathapuram	0.00	0.62	0.00	13.75	14.37
Ranipet	0.00	1.34	6.60	55.77	63.71
Salem	5.04	152.62	263.03	621.91	1,042.60
Sivaganga	0.00	1.55	13.94	86.15	101.64
Tenkasi	0.26	92.13	69.85	202.91	365.15
Thanjavur	0.00	0.00	0.06	10.58	10.64
The Nilgiris	3.11	152.21	374.45	591.97	1,121.74
Theni	3.55	189.55	307.30	477.30	977.70
Thiruvarur	0.00	0.00	0.01	4.65	4.66
Thoothukudi	0.00	6.59	0.69	65.42	72.70
Tiruchchirapalli	0.31	52.83	75.91	254.13	383.18
Tirunelveli	0.00	194.16	59.97	517.89	772.02
Tirupathur	1.92	72.21	237.84	427.66	739.63
Tiruppur	12.74	41.24	93.92	240.50	388.40
Tiruvallur	0.00	3.98	14.68	95.28	113.94
Tiruvannamalai	2.62	125.32	307.61	820.22	1,255.77
Vellore	0.68	95.03	241.96	379.20	716.87
Viluppuram	0.24	12.69	23.59	71.81	108.33
Virudhunagar	0.95	43.23	82.27	135.23	261.68
Total	91.88	2,701.47	4,769.99	10,619.94	18,183.28

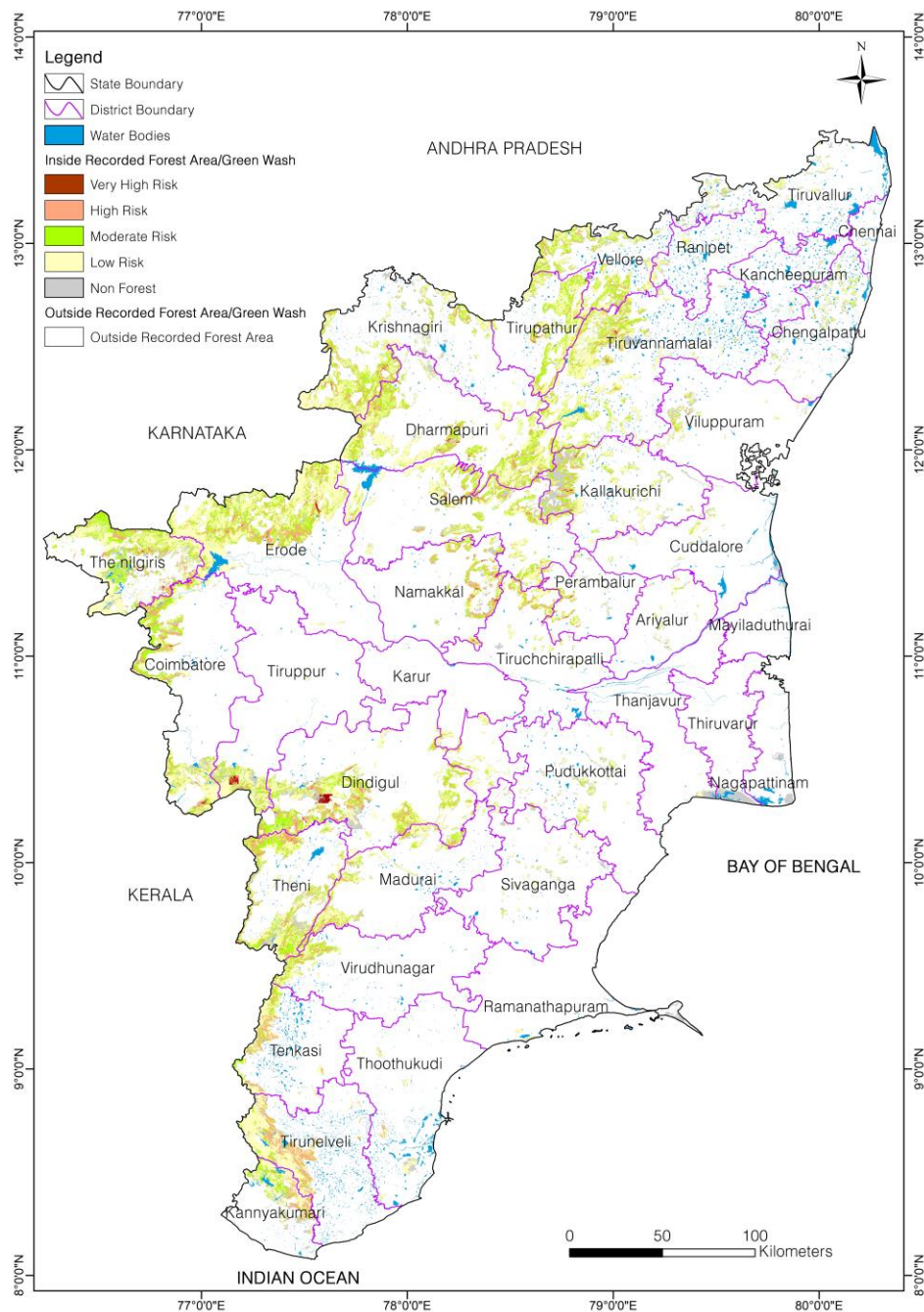


Figure 2.24 Forest fire risk zonation map of Tamil Nadu

Very high fire risk and high fire risk zones have been observed in the districts of Kanyakumari and parts of Tirunelveli and Dindigul. High fire risk zones cover a substantial portion of southern Tamil Nadu, particularly in the southern and southwestern regions, including districts such as Tenkasi, Thoothukudi, and parts of Madurai and Dindigul. Around 71.30% of the forest cover inside RFA falls under moderate to low risk zone.

2.25. Telangana

Different forest fire risk zones inside RFA is shown in the Table 2.25. From the table, it can be inferred that 4.07% of the total RFA area falls under very high risk, 38.89% under high risk, 21.46% under moderate risk and 9.09% under low risk. No forest cover inside RFA has been observed in the very high fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.25.

Table 2.25 District-wise RFA/GW Area in different forest fire risk zone in Telangana

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Adilabad	76.04	601.87	333.34	98.33	1,109.58
Bhadradri Kothagudem	192.68	1,502.65	602.96	206.67	2,504.96
Hanumakonda	0.45	13.57	5.21	1.38	20.61
Hyderabad	0.04	1.10	0.30	0.01	1.45
Jagtial	28.75	250.78	154.76	43.00	477.29
Jangaon	1.35	15.16	4.31	2.34	23.16
Jayashankar Bhupalpally	19.66	601.67	455.25	74.41	1,150.99
Jogulamba Gadwal	0.00	0.13	0.14	0.05	0.32
Kamareddy	10.16	279.93	231.12	62.67	583.88
Karimnagar	0.00	1.30	2.24	0.60	4.14
Khammam	34.74	263.71	105.52	46.21	450.18
Kumuram Bheem	141.71	1,100.77	365.46	112.83	1,720.77
Mahabubabad	89.32	563.03	195.84	43.20	891.39
Mahabubnagar	14.72	107.36	49.69	15.25	187.02
Mancherial	57.23	861.95	445.57	80.48	1,445.23
Medak	7.22	201.63	183.01	49.91	441.77
Medchal-Malkajgiri	2.79	40.31	19.90	8.04	71.04
Mulugu	136.55	1,516.98	809.78	149.44	2,612.75
Nagarkurnool	150.85	621.50	550.90	831.89	2,155.14
Nalgonda	1.56	60.98	157.32	248.88	468.74
Narayanpet	2.34	35.04	20.52	2.80	60.70
Nirmal	32.46	634.80	307.27	37.78	1,012.31
Nizamabad	29.14	354.39	243.47	65.59	692.59
Peddapalli	18.93	130.21	81.76	19.66	250.56
Rajanna Sircilla	12.62	172.04	50.80	14.05	249.51
Rangareddy	9.65	134.36	86.39	20.23	250.63
Sangareddy	3.73	62.32	46.07	24.43	136.55
Siddipet	0.14	48.79	85.36	53.20	187.49
Suryapet	0.00	0.85	12.51	65.92	79.28
Vikarabad	10.84	174.28	93.25	41.64	320.01
Wanaparthy	4.72	45.60	18.71	4.07	73.10
Warangal	2.60	23.54	5.79	2.98	34.91
Yadadri Bhuvanagiri	0.12	32.31	43.97	16.82	93.22
Total	1,093.11	10,454.91	5,768.49	2,444.76	19,761.27

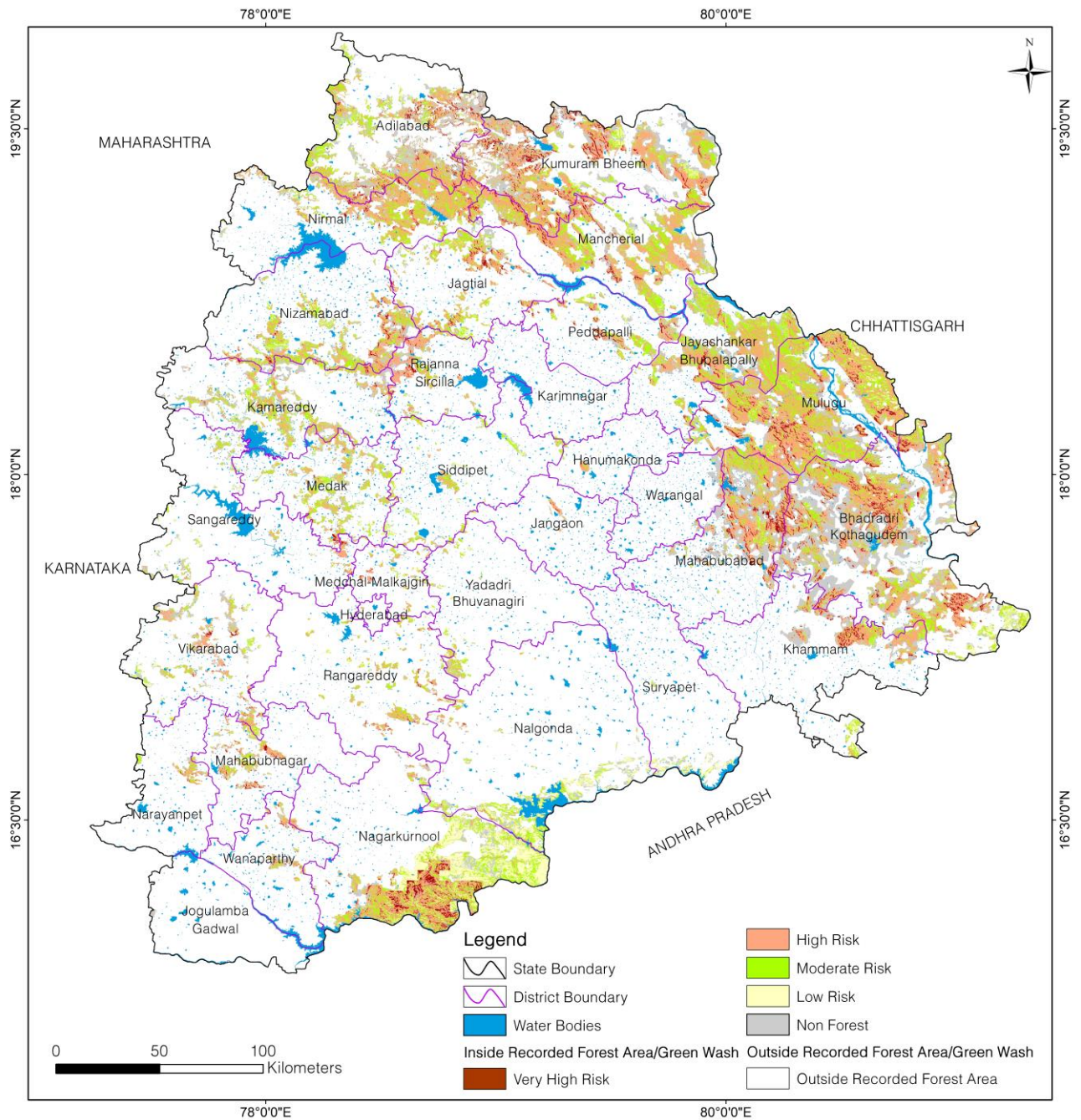


Figure 2.25 Forest fire risk zonation map of Telangana

Very high fire risk and high fire risk zones has been observed in Bhadrachalam, Kothagudem, Nagarkurnool and Mulugu districts.

2.26. Tripura

Different forest fire risk zones inside RFA is shown in the Table 2.26. From the table, it can be inferred that 7.22% of the total RFA area falls under very high risk, 41.46% under high risk, 34.07% under moderate risk and 9.42% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.26.

Table 2.26 District-wise RFA/GW Area in different forest fire risk zone in Tripura
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Dhalai	142.57	677.88	579.87	160.83	1,561.15
Gomati	51.99	439.87	369.35	128.40	989.61
Khowai	36.62	257.86	212.89	69.73	577.10
North Tripura	83.79	348.55	343.96	73.45	849.75
Sepahijala	9.47	134.48	95.45	36.49	275.89
South Tripura	50.62	378.57	249.65	57.08	735.92
Unakoti	28.73	135.67	123.19	25.53	313.12
West Tripura	26.16	96.02	54.36	9.25	185.79
Total	429.95	2,468.90	2,028.72	560.76	5,488.33

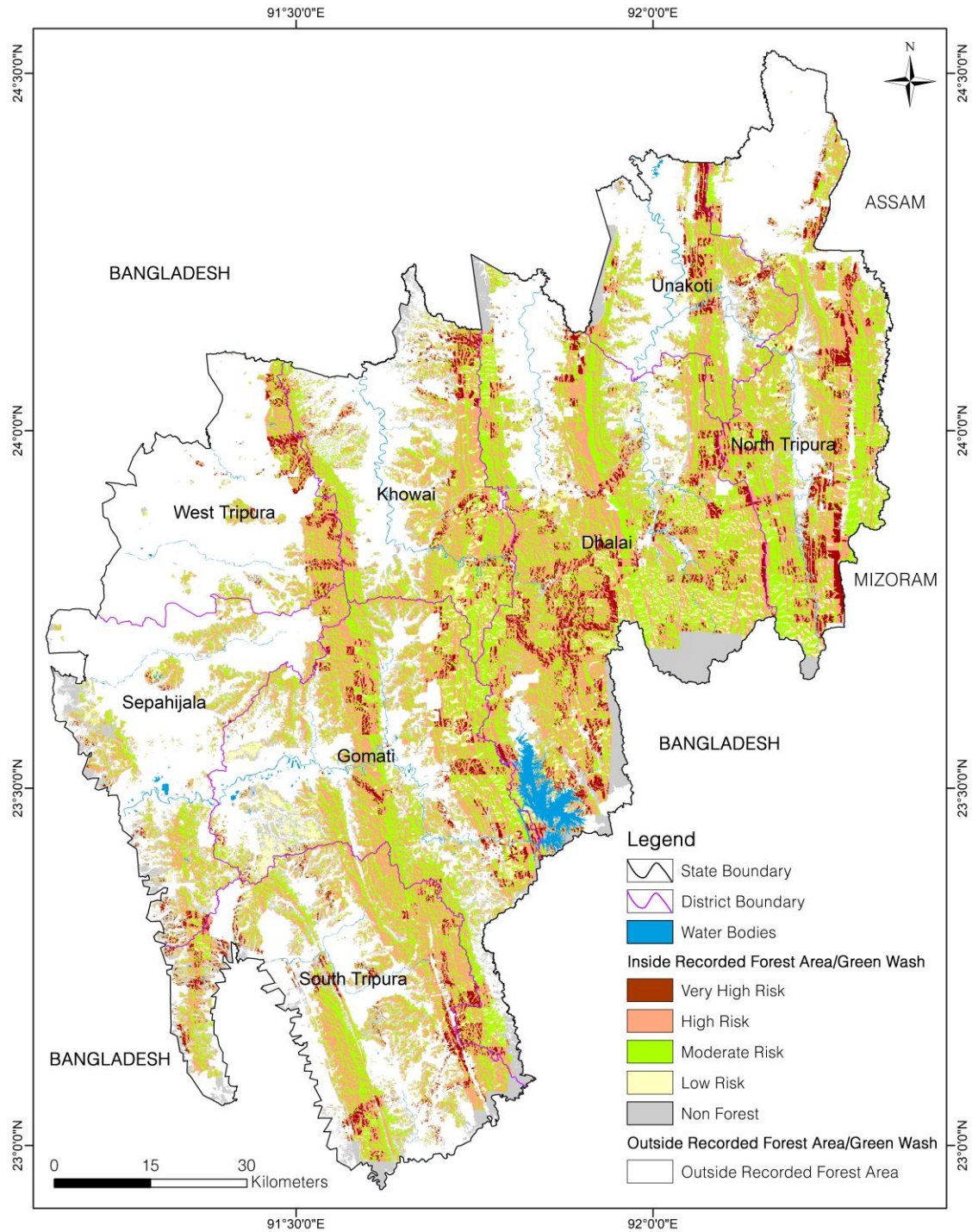


Figure 2.26 Forest fire risk zonation map of Tripura

Very high fire risk and high fire risk zones has been observed in all the districts of the state largest RFA under forest fire risk zone. Around 41.46% and 34.07% of the forest cover inside RFA falls under the high fire risk and moderate fire risk zone respectively.

2.27. Uttar Pradesh

Different forest fire risk zones inside GW is shown in the Table 2.27. From the table, it can be inferred that 2.52% of the total GW area falls under very high risk, 20.89% under high risk, 28.81% under moderate risk and 19.75% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.27.

Table 2.27 District-wise RFA/GW Area in different forest fire risk zone in Uttar Pradesh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Agra	1.05	25.57	89.08	116.17	231.87
Aligarh	0.00	0.00	0.00	0.01	0.01
Ambedkar Nagar	0.00	0.00	0.00	0.00	0.00
Amethi	0.00	0.19	6.91	1.85	8.95
Amroha /Jyotiba Phule Nagar	0.00	0.00	0.47	6.87	7.34
Auraiya	0.00	0.71	7.73	25.47	33.91
Ayodhya / Faizabad	0.00	0.00	6.11	8.00	14.11
Azamgarh	0.00	0.00	0.00	0.00	0.00
Baghpat	0.00	0.02	0.46	5.02	5.50
Bahraich	0.00	28.60	249.92	169.05	447.57
Ballia	0.00	0.00	0.00	0.00	0.00
Balrampur	0.00	4.88	224.70	252.59	482.17
Banda	7.14	15.97	8.69	1.22	33.02
Bara Banki	0.00	0.00	3.55	4.64	8.19
Bareilly	0.00	0.00	0.00	0.00	0.00
Basti	0.00	0.00	0.44	5.67	6.11
Bhadohi / Sant Ravidas Nagar	0.00	0.00	0.00	0.20	0.20
Bijnor	0.46	105.75	108.43	34.71	249.35
Budaun	0.00	0.20	2.60	9.02	11.82
Bulandshahr	0.00	0.01	0.80	3.46	4.27
Chandauli	12.48	194.86	322.75	27.21	557.30
Chitrakoot	85.17	292.85	172.48	6.74	557.24
Deoria	0.00	0.00	0.00	0.01	0.01
Etah	0.00	0.00	0.00	0.00	0.00
Etawah	1.15	17.60	54.66	102.14	175.55
Farrukhabad	0.00	0.00	0.13	1.25	1.38
Fatehpur	0.00	0.00	0.00	2.82	2.82
Firozabad	0.23	9.46	23.79	24.63	58.11
Gautam Buddha Nagar	0.00	0.00	0.02	1.19	1.21
Ghaziabad	0.00	0.00	0.00	0.00	0.00

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Ghazipur	0.00	0.00	0.00	0.00	0.00
Gonda	0.09	12.30	49.26	23.47	85.12
Gorakhpur	0.00	0.00	1.07	40.57	41.64
Hamirpur	0.05	1.61	41.05	90.35	133.06
Hapur	0.00	0.00	0.00	0.00	0.00
Hardoi	0.00	0.06	2.78	3.25	6.09
Hathras / Mahamaya Nagar	0.00	0.01	0.55	0.07	0.63
Jalaun	0.50	6.31	52.94	110.81	170.56
Jaunpur	0.00	0.00	0.00	0.00	0.00
Jhansi	1.84	20.43	63.10	86.01	171.38
Kannauj	0.00	0.00	1.10	3.08	4.18
Kanpur Dehat	0.00	0.00	0.28	1.22	1.50
Kanpur Nagar	0.00	0.00	0.00	1.02	1.02
Kasganj / Kanshiram Nagar	0.00	0.00	0.00	0.00	0.00
Kaushambi	0.00	0.00	0.00	0.00	0.00
Kheri	0.13	44.35	510.11	449.89	1,004.48
Kushinagar	0.00	0.00	0.00	2.46	2.46
Lalitpur	5.47	186.81	241.26	84.88	518.42
Lucknow	0.00	0.00	2.09	18.12	20.21
Mahoba	0.24	8.29	37.99	55.09	101.61
Mahrajganj	0.00	0.22	1.17	316.92	318.31
Mainpuri	0.00	0.00	0.04	0.53	0.57
Mathura	0.00	0.30	2.29	7.69	10.28
Mau	0.00	0.00	0.00	0.00	0.00
Meerut	0.00	0.18	12.03	7.23	19.44
Mirzapur	81.31	364.50	222.68	11.26	679.75
Moradabad	0.00	0.00	0.00	0.00	0.00
Muzaffarnagar	0.00	0.00	0.13	15.39	15.52
Pilibhit	0.06	37.00	380.03	145.06	562.15
Pratapgarh	0.00	0.06	0.61	0.41	1.08
Prayagraj / Allahabad	2.00	31.98	56.76	7.77	98.51
Raebareli	0.00	0.00	0.31	3.26	3.57
Rampur	0.00	3.29	32.30	1.39	36.98
Saharanpur	0.00	1.79	71.24	78.61	151.64
Sambhal	0.00	0.00	0.00	0.00	0.00
Sant Kabir Nagar	0.00	0.00	0.03	0.04	0.07
Shahjahanpur	0.05	5.42	18.00	2.16	25.63
Shamli	0.00	0.00	0.00	0.00	0.00
Shravasti	0.17	35.05	102.03	169.08	306.33

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Siddharthnagar	0.00	0.02	0.81	8.83	9.66
Sitapur	0.00	0.03	5.52	9.71	15.26
Sonbhadra	137.66	1,344.45	669.52	82.53	2,234.16
Sultanpur	0.00	0.00	0.09	0.15	0.24
Unnao	0.00	0.00	0.07	0.14	0.21
Varanasi	0.00	0.00	0.00	0.00	0.00
Total	337.25	2,801.13	3,862.96	2,648.39	9,649.73

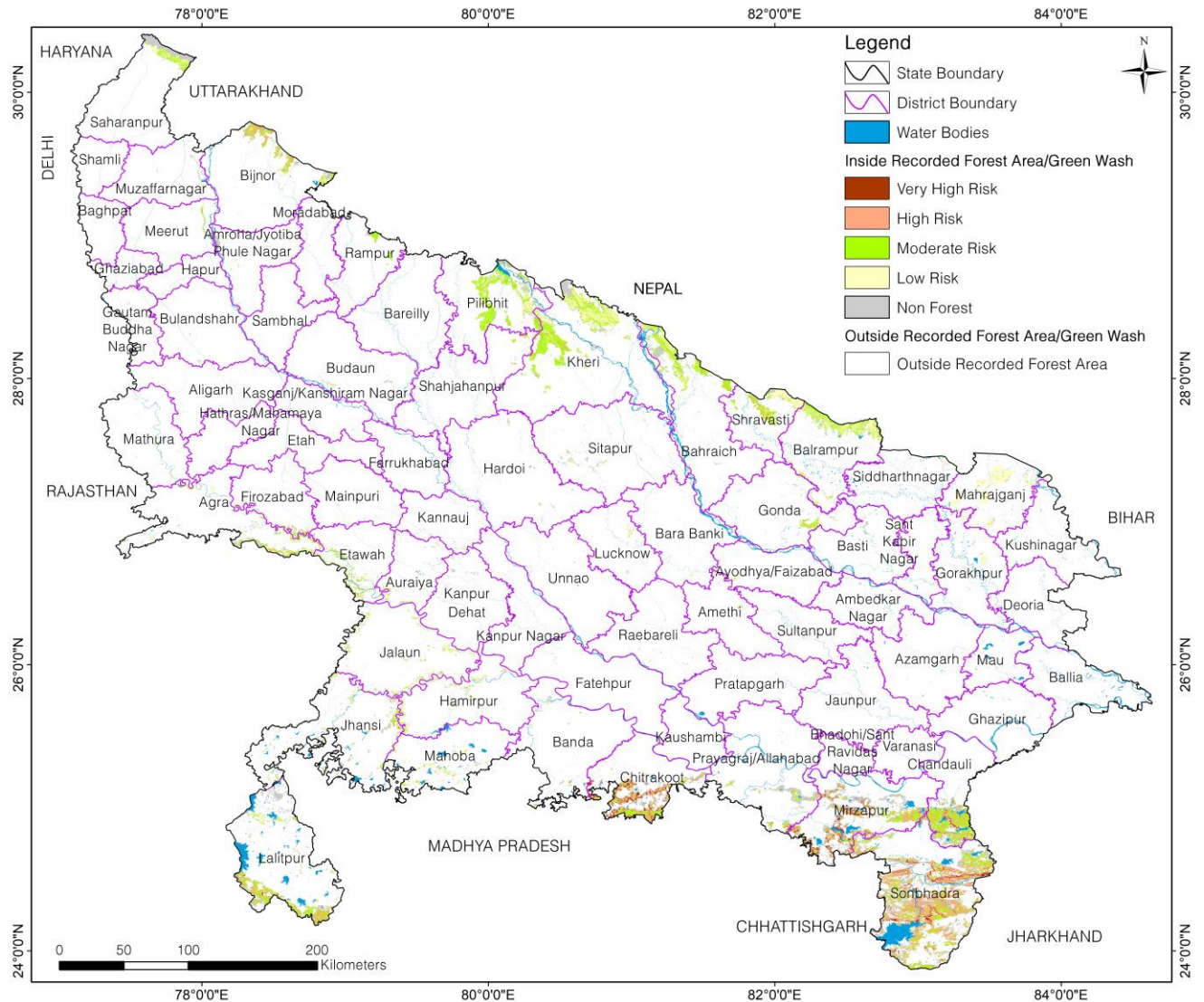


Figure 2.27 Forest fire risk zonation map of Uttar Pradesh

Very high and high fire risk zones has been observed in Sonbhadra, Mirzapur and Chitrakoot.

2.28. Uttarakhand

Different forest fire risk zones inside RFA is shown in the Table 2.28. From the table, it can be inferred that 4.67% of the total RFA area falls under very high risk, 17.30% under high risk, 23.56% under moderate risk and 21.04% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.28.

Table 2.28 District-wise RFA/GW Area in different forest fire risk zone in Uttarakhand

Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Almora	105.85	375.24	217.85	8.99	707.93
Bageshwar	49.15	273.61	200.14	107.50	630.40
Chamoli	66.55	233.27	495.30	1,320.42	2,115.54
Champawat	57.70	301.76	275.13	12.24	646.83
Dehradun	36.64	279.96	698.26	212.26	1,227.12
Garhwal	288.05	950.15	619.18	140.49	1,997.87
Haridwar	2.48	46.64	369.76	73.54	492.42
Nainital	258.21	810.91	1,014.33	175.42	2,258.87
Pithoragarh	17.70	133.86	233.31	280.69	665.56
Rudraprayag	15.33	94.26	295.75	538.63	943.97
Tehri Garhwal	178.18	540.77	588.76	446.38	1,754.09
Udham Singh Nagar	0.13	7.94	292.34	151.14	451.55
Uttarkashi	115.28	363.10	707.30	1,896.13	3,081.81
Total	1,191.25	4,411.47	6,007.41	5,363.83	16,973.96

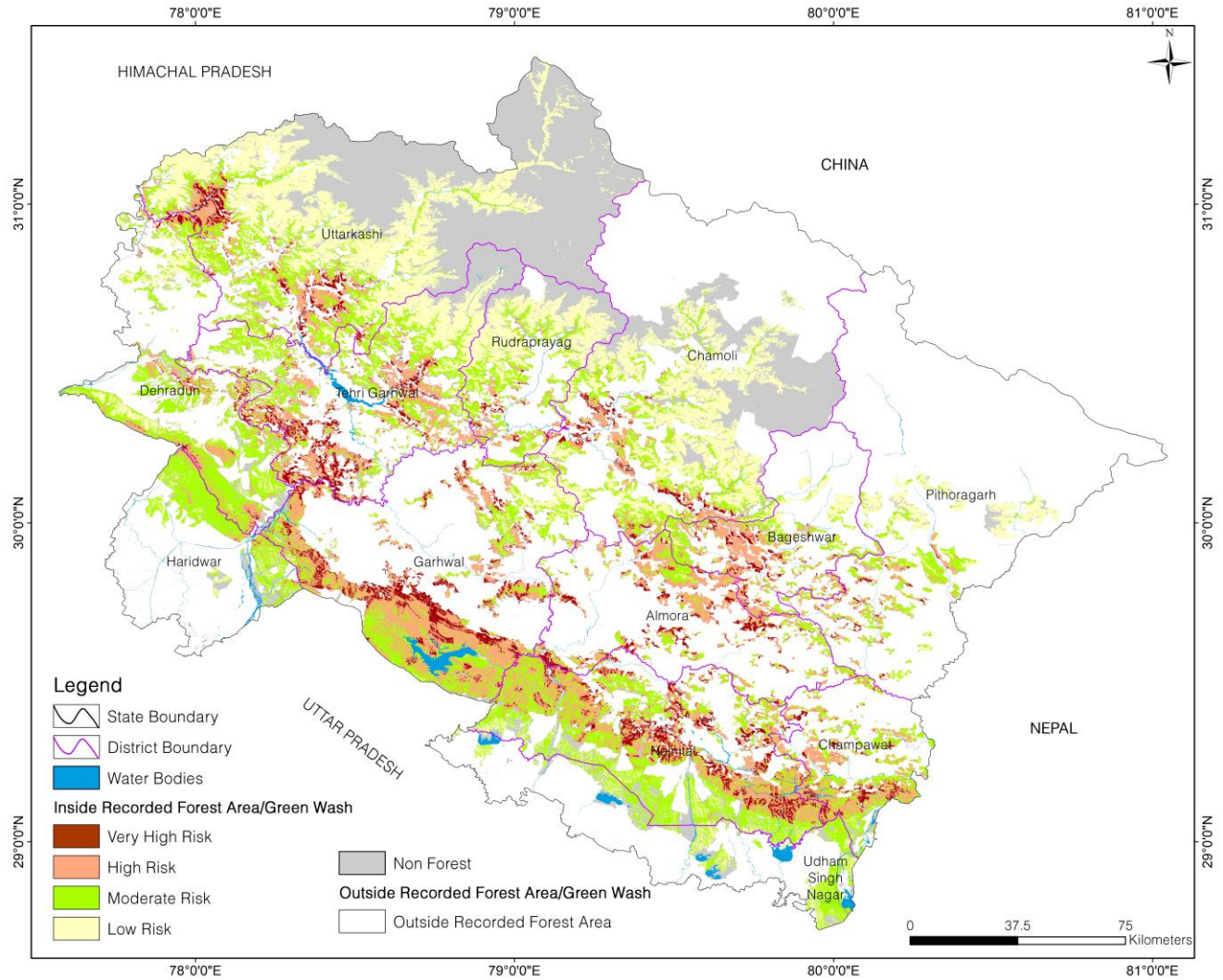


Figure 2.28 Forest fire risk zonation map of Uttarakhand

Very high fire risk and high fire risk zones has been observed in all the districts of the state. Around 44.60% of the forest cover inside RFA falls under moderate to low fire risk zone.

2.29. West Bengal

Different forest fire risk zones inside RFA is shown in the Table 2.29. From the table, it can be inferred that 0.59 % of the total RFA area falls under very high risk, 10.56% under high risk, 24.63% under moderate risk and 30.10% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the state in Figure 2.29.

Table 2.29 District-wise RFA/GW Area in different forest fire risk zone in West Bengal
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Alipurduar	0.05	5.33	151.31	970.25	1,126.94
Bankura	2.92	190.81	873.17	119.03	1,185.93
Birbhum	1.05	52.55	64.29	13.93	131.82
Cooch Behar	0.02	1.84	5.97	19.00	26.83
Dakshin Dinajpur	0.00	0.00	0.61	3.59	4.20
Darjeeling	0.00	0.26	35.44	559.94	595.64
Hoogly	0.00	0.00	0.01	2.68	2.69
Howrah	0.00	0.00	0.00	0.00	0.00
Jalpaiguri	1.47	41.34	335.37	227.93	606.11
Jhargram	7.99	304.06	460.26	54.44	826.75
Kalimpong	0.47	8.20	24.51	600.85	634.03
Kolkata	0.00	0.00	0.00	0.00	0.00
Malda	0.00	0.00	2.89	5.81	8.70
Murshidabad	0.00	0.00	1.62	2.93	4.55
Nadia	0.00	0.18	6.42	6.69	13.29
North 24 Parganas	0.00	0.00	0.02	24.82	24.84
Paschim Bardhaman	1.91	13.07	89.62	44.28	148.88
Paschim Medinipur	0.48	154.40	625.30	44.43	824.61
Purba Bardhaman	0.00	0.29	58.61	41.54	100.44
Purba Medinipur	0.00	0.00	0.05	8.94	8.99
Purulia	52.80	472.06	167.04	42.84	734.74
South 24 Parganas	0.00	0.10	0.61	749.77	750.48
Uttar Dinajpur	0.00	0.05	0.70	4.67	5.42
Total	69.16	1,244.54	2,903.82	3,548.36	7,765.88

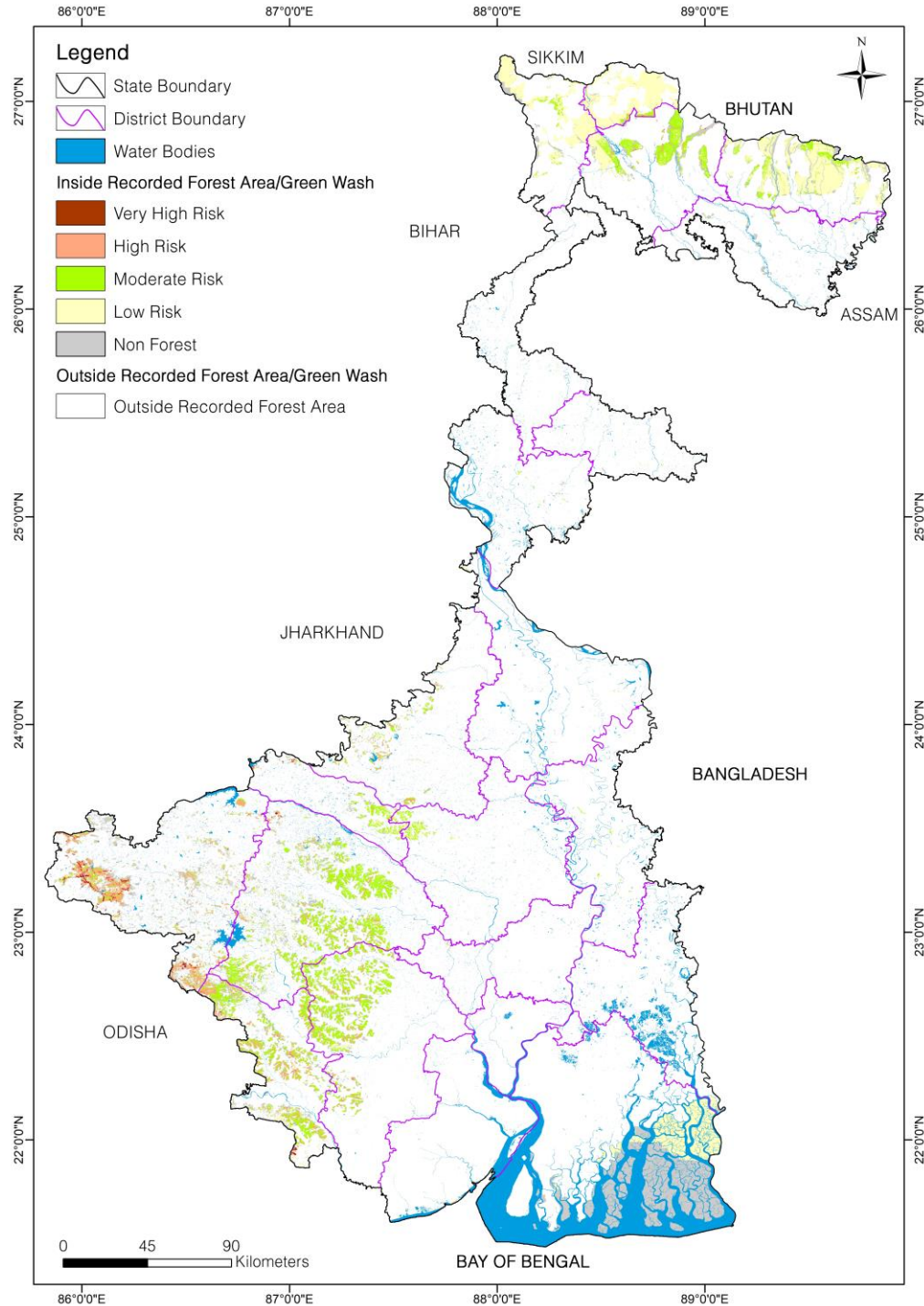


Figure 2.29 Forest fire risk zonation map of West Bengal

Very high fire risk and high fire risk zones has been observed in Purulia, Bankura and Jhargram districts. Purulia district has the largest RFA under forest fire risk zone. Around 24.63% of the forest cover inside RFA falls under the moderate fire risk zone.

2.30. Andaman & Nicobar Islands

Different forest fire risk zones inside RFA is shown in the Table 2.30. From the table, it can be inferred that 91.50% of the total RFA area falls under low risk. No forest cover inside RFA has been observed in the very high, high and moderate fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.30.

Table 2.30 District-wise RFA/GW Area in different forest fire risk zone in Andaman & Nicobar Islands
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Nicobar	0.00	0.00	0.00	1,269.50	1,269.50
North & Middle Andaman	0.00	0.00	0.00	2,800.84	2,800.84
South Andaman	0.00	0.00	0.00	2,103.27	2,103.27
Total	0.00	0.00	0.00	6,173.61	6,173.61

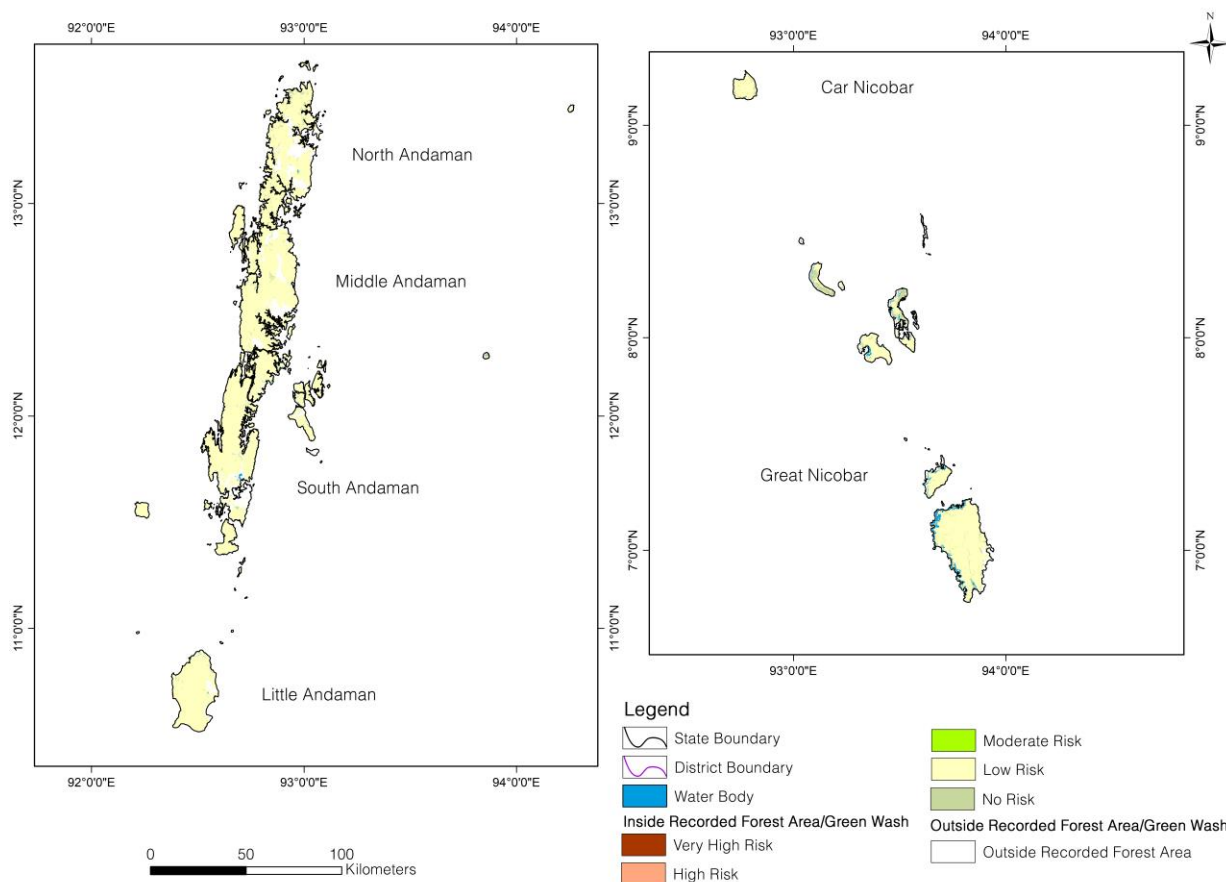


Figure 2.30 Forest fire risk zonation map of Andaman & Nicobar Island

Around 91.95% of the forest cover inside RFA falls under the low risk zone.

2.31. Chandigarh

Different forest fire risk zones inside RFA is shown in the Table 2.31. From the table, it can be inferred that 10.42% of the total RFA area falls under very high risk, 62.54% under high risk and 6.45% under moderate risk. No forest cover inside RFA has been observed in the low fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.31.

Table 2.31 District-wise RFA/GW Area in different forest fire risk zone in Chandigarh
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Chandigarh	1.18	7.08	0.73	0.00	8.99
Total	1.18	7.08	0.73	0.00	8.99

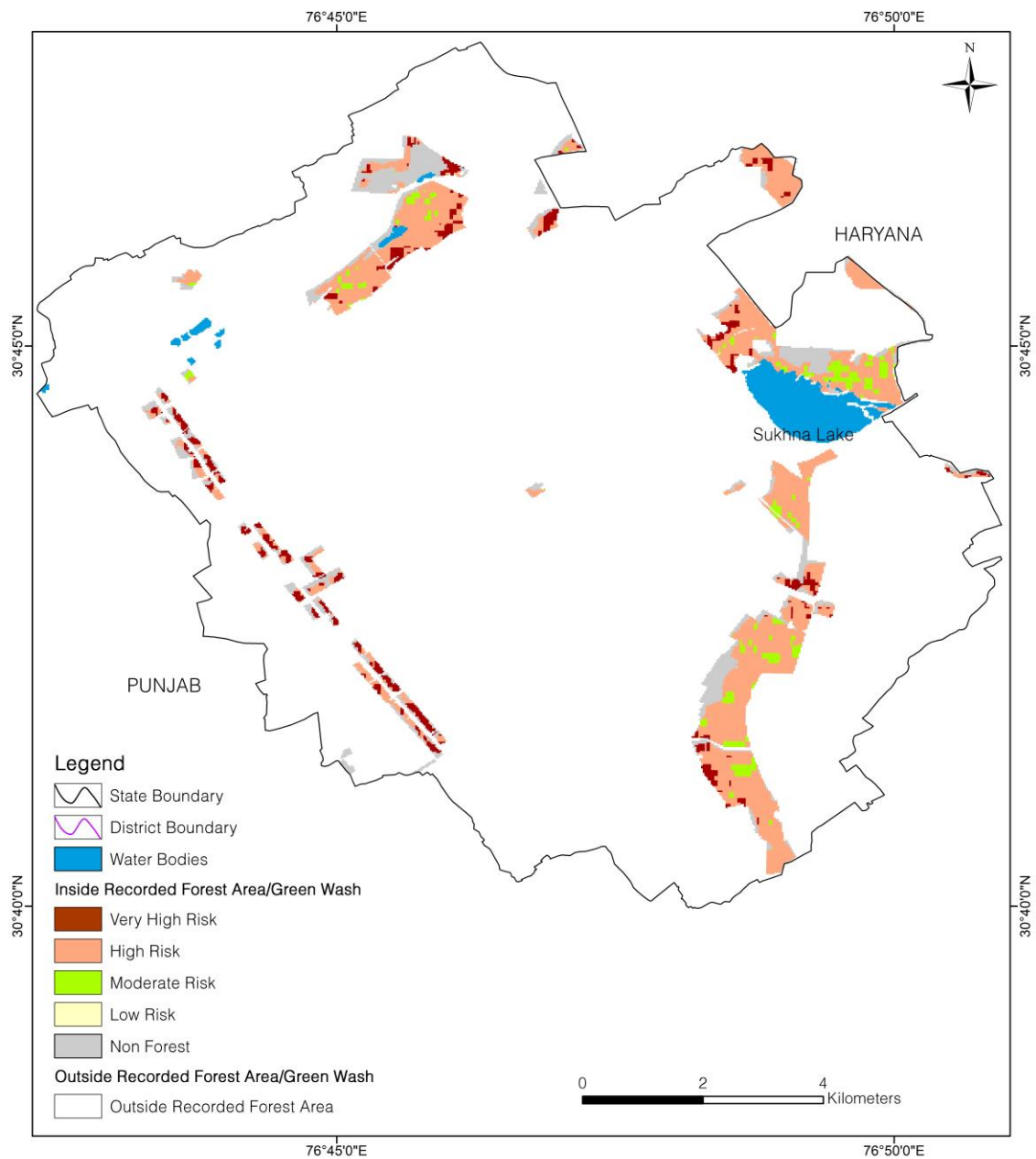


Figure 2.31 Forest fire risk zonation map of Chandigarh

Around 62.54% of the forest cover inside RFA falls under high risk zone.

2.32. Dadra & Nagar Haveli and Daman & Diu

Different forest fire risk zones inside RFA is shown in the Table 2.32 From the table, it can be inferred that 2.29% of the total RFA area falls under high risk, 56.30% under moderate risk and 24.01% under low risk. No forest cover inside RFA has been observed in the very high fire risk zone. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.32.

Table 2.32 District-wise RFA/GW Area in different forest fire risk zone in Dadra & Nagar Haveli and Daman & Diu

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Dadra & Nagar Haveli	0.00	4.52	110.88	47.28	162.68
Daman	0.00	0.00	0.00	0.00	0.00
Diu	0.00	0.00	0.00	0.00	0.00
Total	0.00	4.52	110.88	47.28	162.68

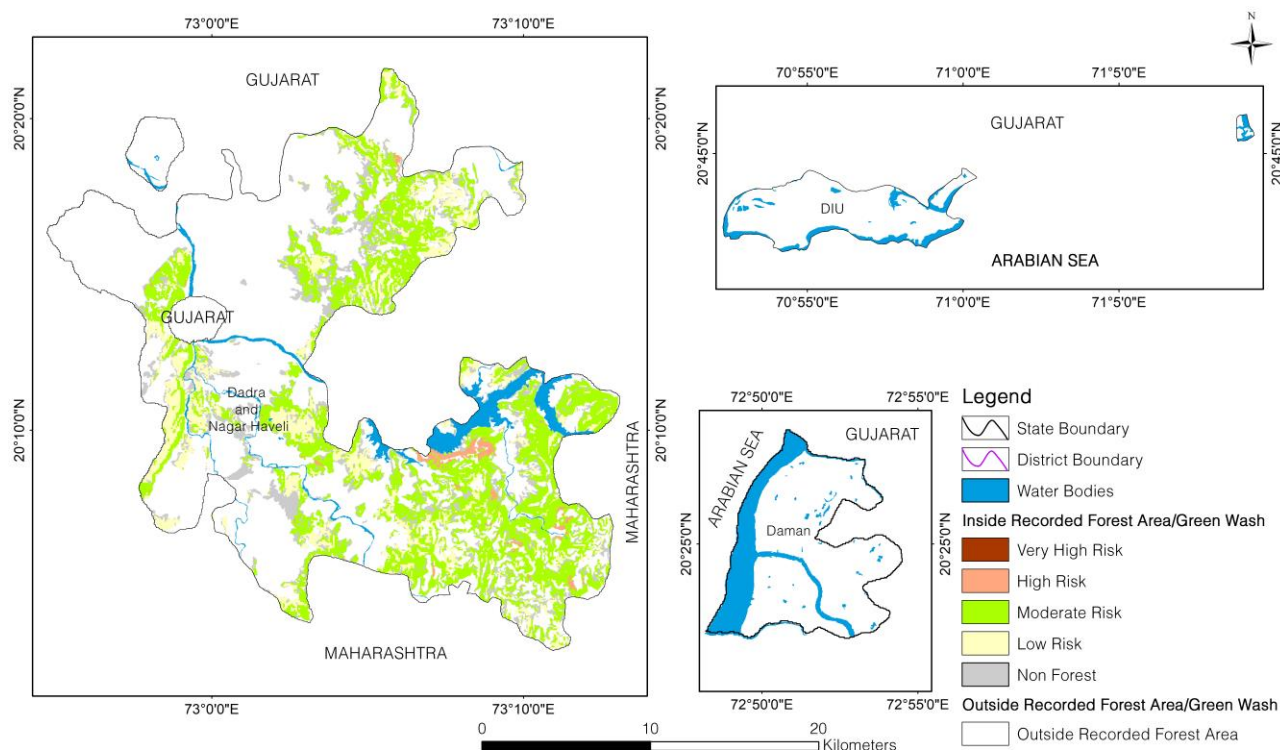


Figure 2.32 Forest fire risk zonation map of Dadra & Nagar Haveli and Daman & Diu

Moderate fire risk and low fire risk zones has been observed in UT. Around 56.30% of the forest cover inside RFA falls under moderate fire risk zone

2.33. Jammu & Kashmir

Different forest fire risk zones inside RFA is shown in the Table 2.33. From the table, it can be inferred that 0.10% of the total RFA area falls under very high risk, 3.35% under high risk, 14.57% under moderate risk and 29.80% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.33.

Table 2.33 District-wise RFA/GW Area in different forest fire risk zone in Jammu & Kashmir
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Anantnag	0.00	2.98	263.36	846.44	1,112.78
Badgam	0.00	0.00	4.56	159.95	164.51
Bandipura	0.00	0.62	52.19	517.06	569.87
Baramula	0.00	1.99	114.40	375.97	492.36
Doda	1.29	16.21	199.06	1,043.12	1,259.68
Ganderbal	0.00	0.71	33.27	245.88	279.86
Jammu	1.74	57.18	362.62	67.29	488.83
Kathua	3.20	123.21	465.04	239.77	831.22
Kishtwar	1.78	20.83	242.21	2,331.75	2,596.57
Kulgam	0.00	0.02	18.11	158.92	177.05
Kupwara	0.00	4.43	267.24	789.35	1,061.02
Mirpur	0.09	1.20	4.28	0.03	5.60
Muzaffarabad	0.00	0.35	14.96	20.05	35.36
Pulwama	0.00	1.50	68.69	136.89	207.08
Punch	1.42	34.22	154.23	251.87	441.74
Rajauri	6.63	252.74	540.29	117.63	917.29
Ramban	0.95	20.07	220.32	319.90	561.24
Reasi	5.49	171.36	402.23	217.78	796.86
Samba	0.15	13.83	171.51	38.53	224.02
Shupiyan	0.00	0.00	3.43	83.67	87.10
Srinagar	0.00	0.00	0.94	0.26	1.20
Udhampur	4.94	205.76	432.60	293.48	936.78
Total	27.68	929.21	4,035.54	8,255.59	13,248.02

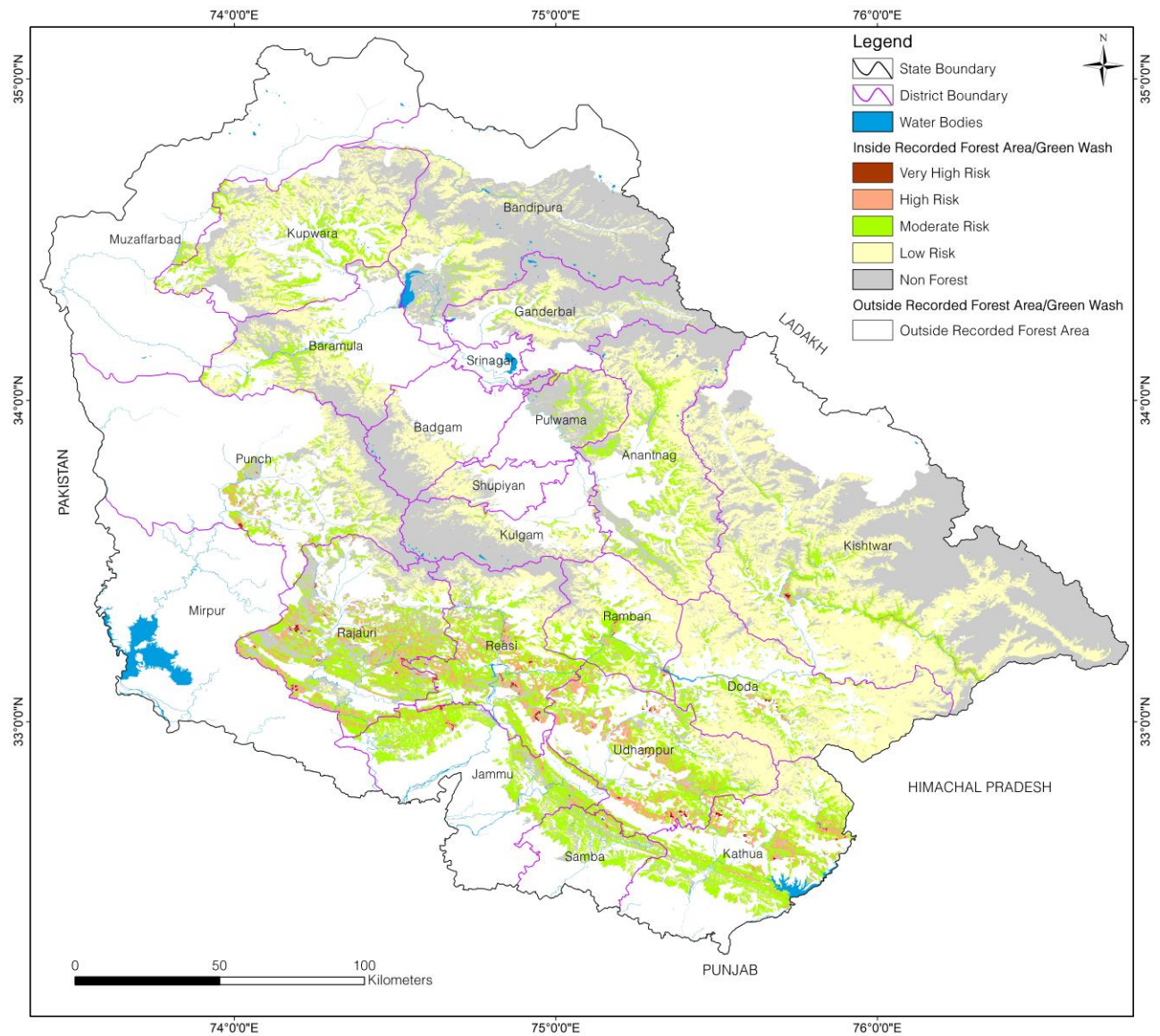


Figure 2.33 Forest fire risk zonation map of Jammu & Kashmir

Very high fire risk and high fire risk zones has been observed in Rajauri, Reasi and Udhampur districts. Around 44.37% of the forest cover inside RFA falls under moderate to low fire risk zone.

2.34. Ladakh

Different forest fire risk zones inside GW is shown in the Table 2.34. From the table, it can be inferred that 0.17% under moderate risk and 27.10% under low risk. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.34.

Table 2.34 District-wise RFA/GW Area in different forest fire risk zone in Ladakh

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Kargil	0.00	0.00	0.00	0.00	0.00
Leh	0.00	0.00	5.27	863.11	868.38
Total	0.00	0.00	5.27	863.11	868.38

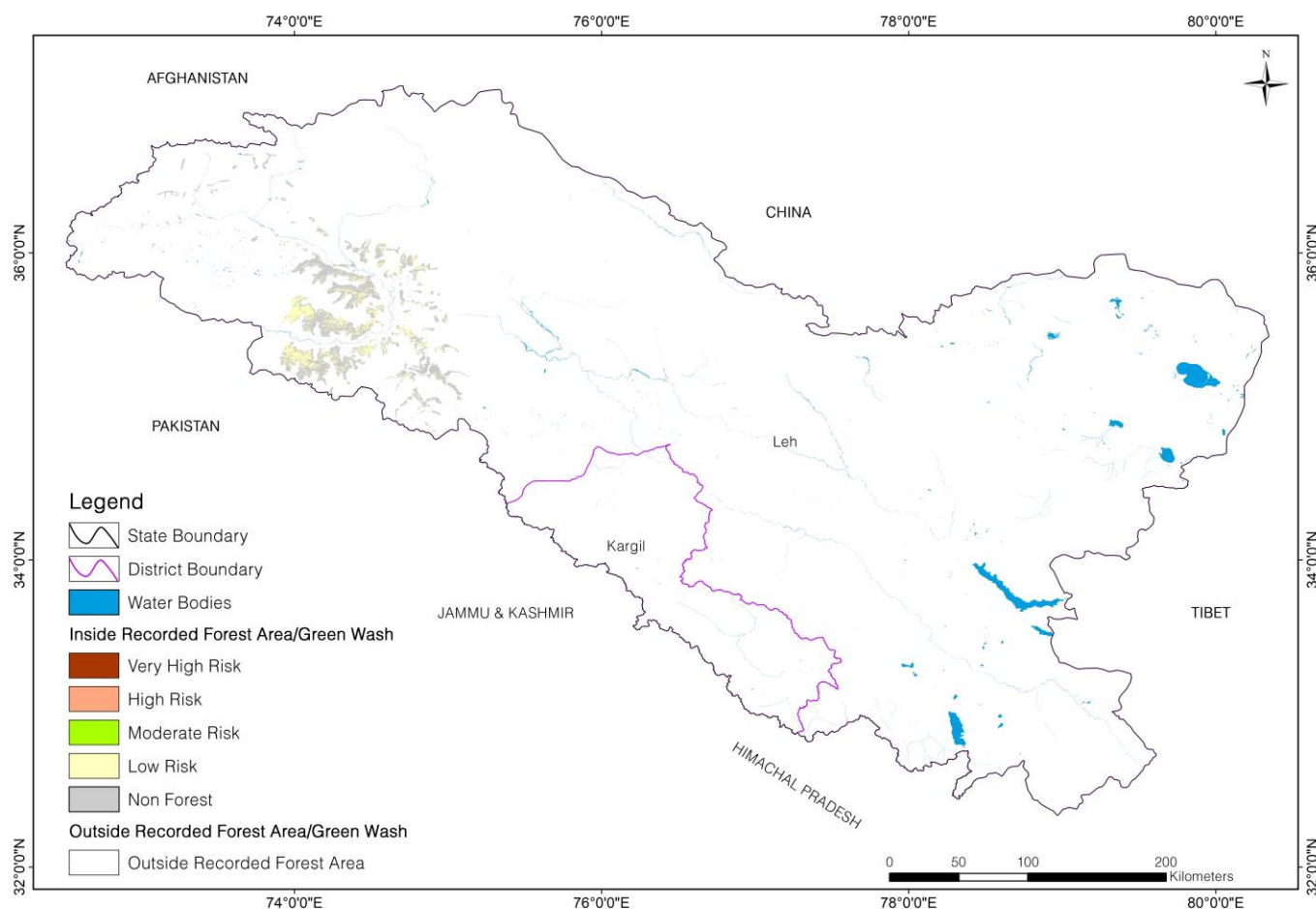


Figure 2.34 Forest fire risk zonation map of Ladakh

Around 27.10% of the forest cover inside GW falls under the low fire risk zone in UT.

2.35. Lakshadweep

No forest fire risk zone has been observed in the UT. No forest cover has been observed in risk zone class.

2.36. Puducherry

Different forest fire risk zones inside RFA is shown in the Table 2.36. From the table, it can be inferred that 0.17% of the total RFA area falls under moderate risk and 27.10% under low risk. Spatial distribution of forest fire risk zones of the state is shown in Figure 5.36.2. No forest cover inside RFA has been observed in the very high risk and high risk zone. Spatial distribution of forest fire risk zone is shown in the map of the UT in Figure 2.36.

Table 2.36 District-wise RFA/GW Area in different forest fire risk zone in Puducherry
Area in km²

District	Forest Fire Risk Zone				Total
	Very High	High	Moderate	Low	
Karaikal	0.00	0.00	0.00	0.00	0.00
Mahe	0.00	0.00	0.00	0.00	0.00
Puducherry	0.00	0.00	0.52	2.62	3.14
Yanam	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.52	2.62	3.14

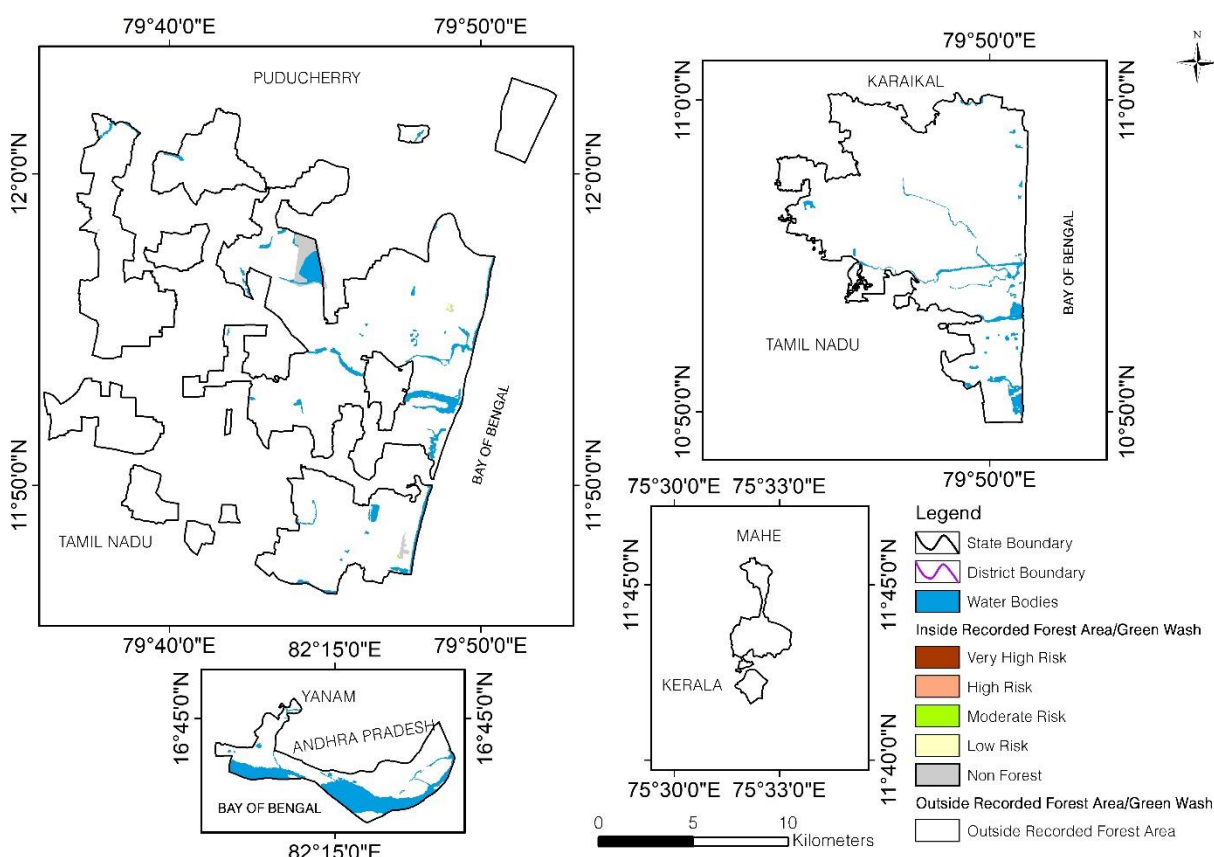
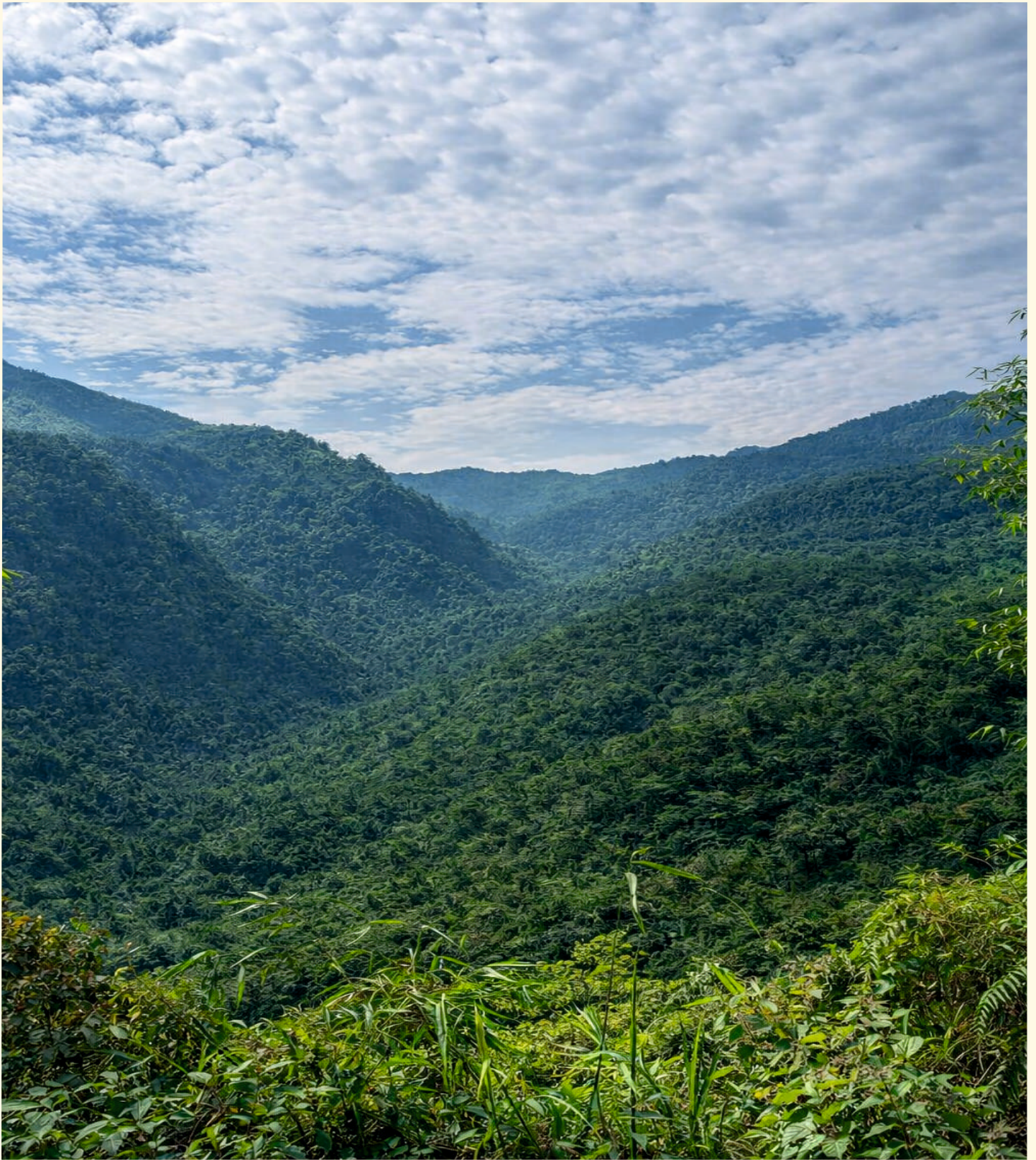


Figure 2.36 Forest fire risk zonation map of Puducherry

Around 27.27% of the forest cover inside RFA falls under the moderate to low fire risk zone in UT.



भारतीय वन सर्वेक्षण Forest Survey of India

Ministry of Environment, Forest & Climate Change
Government of India Dehradun-248195