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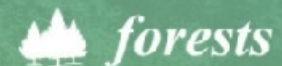
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# **Forest cover change analysis using remote sensing and its impact on forest sustainability at Fasiakhali Wildlife Sanctuary.**

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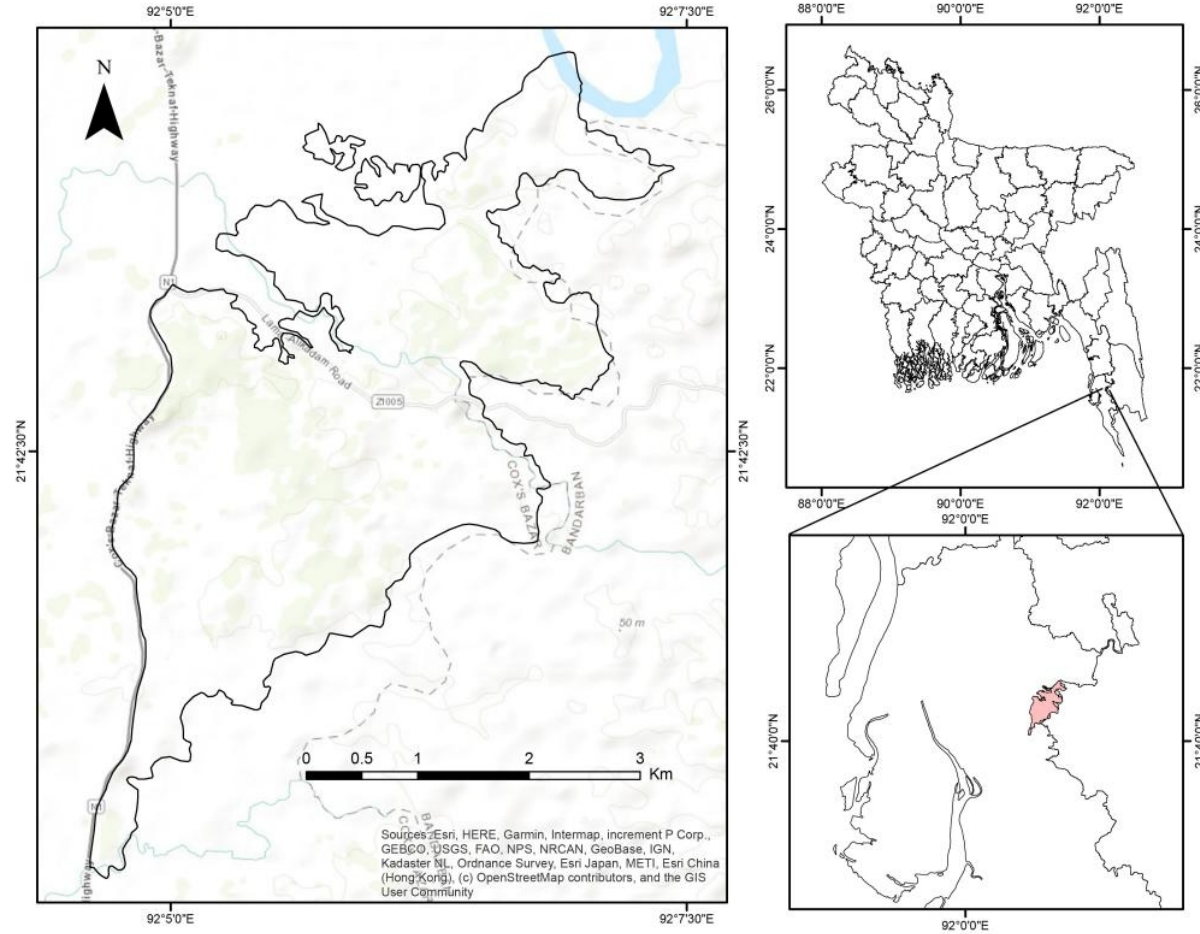


# Introduction

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- Global forest cover are in great threat of destruction
- Sustainable land area management requires knowledge about 'land use land cover change' (LULCC) of the area.
- The Fasiakhali Wildlife Sanctuary (FWS) is one of the last resort for few herds of Asian Elephant.
- The forest requires a new lookup at the change dynamics for its land use and land cover.

# Study area



**Figure 1.** Study area showing the position of FWS in Bangladesh map.

# Materials and Methods

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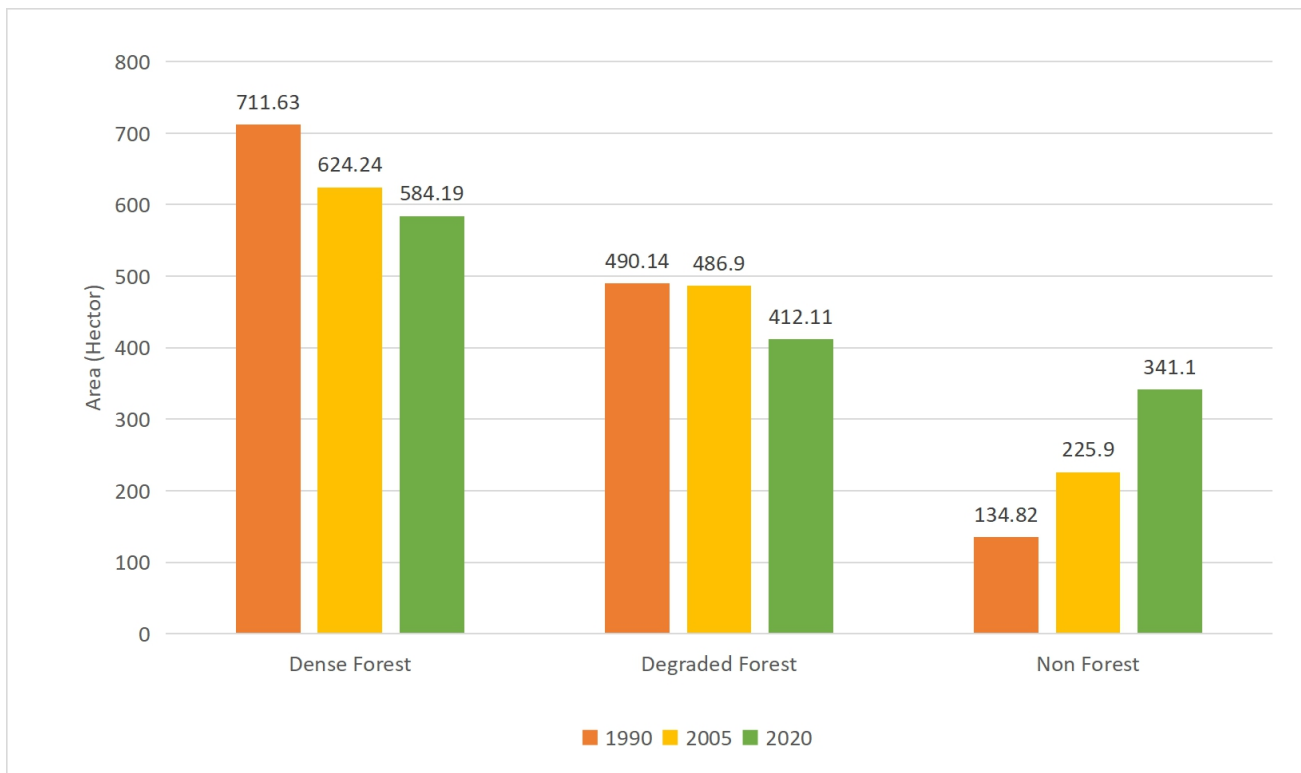
- Landsat 5 TM images for 1990 and 2005
- Landsat 8 OLI/TIRS image for 2020
- Supervised classification using Maximum Likelihood classifier
- Accuracy assessment using Google Earth historic images

# Results and Discussion

- The overall accuracy was 86.67%, 94.44% and 93.33% respectively to 1990, 2005 and 2020.

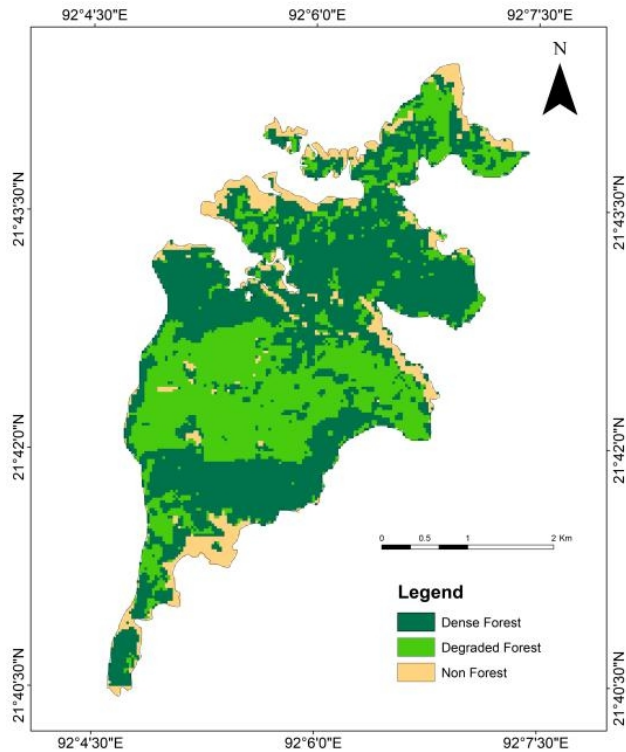
Forest cover class	1990		2005		2020	
	Producer's	User's	Producer's	User's	Producer's	User's
Dense Forest	88.64%	90.69%	95%	97.43%	96.67%	93.54%
Degraded Forest	83.87%	83.87%	92.59%	92.59%	83.33%	100%
non-forest	86.67%	81.25%	95.65%	91.67%	100%	88.24%
Overall accuracy	86.67 %		94.44 %		93.33 %	
Kappa Index	0.78		0.91		0.92	

# Results and Discussion

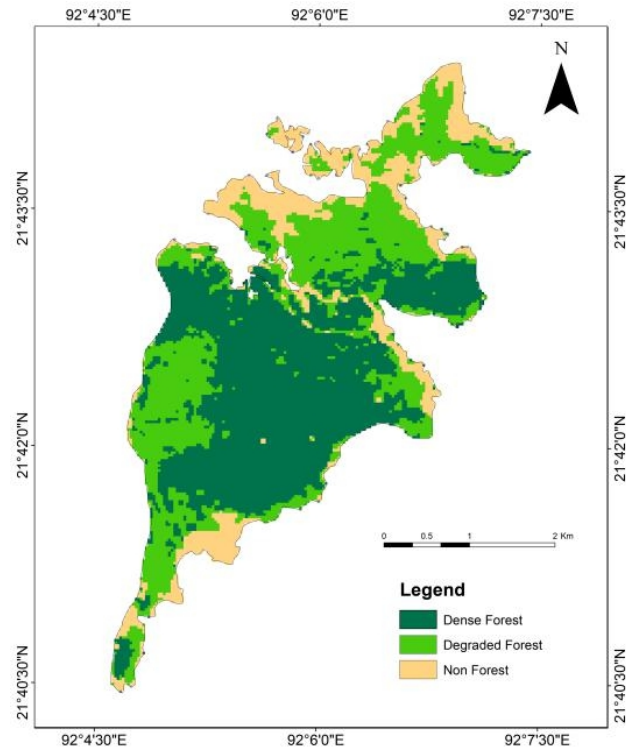


- Area of forest cover

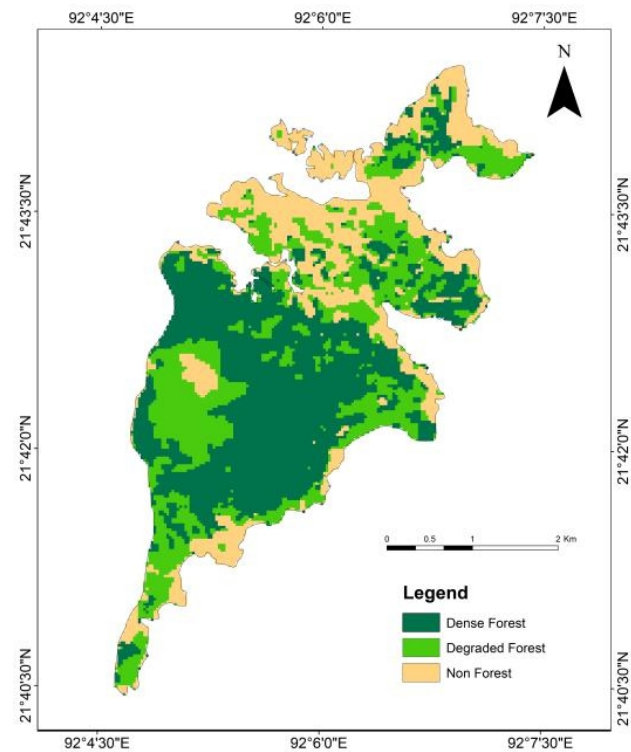
# Results and Discussion



(a) 1990;

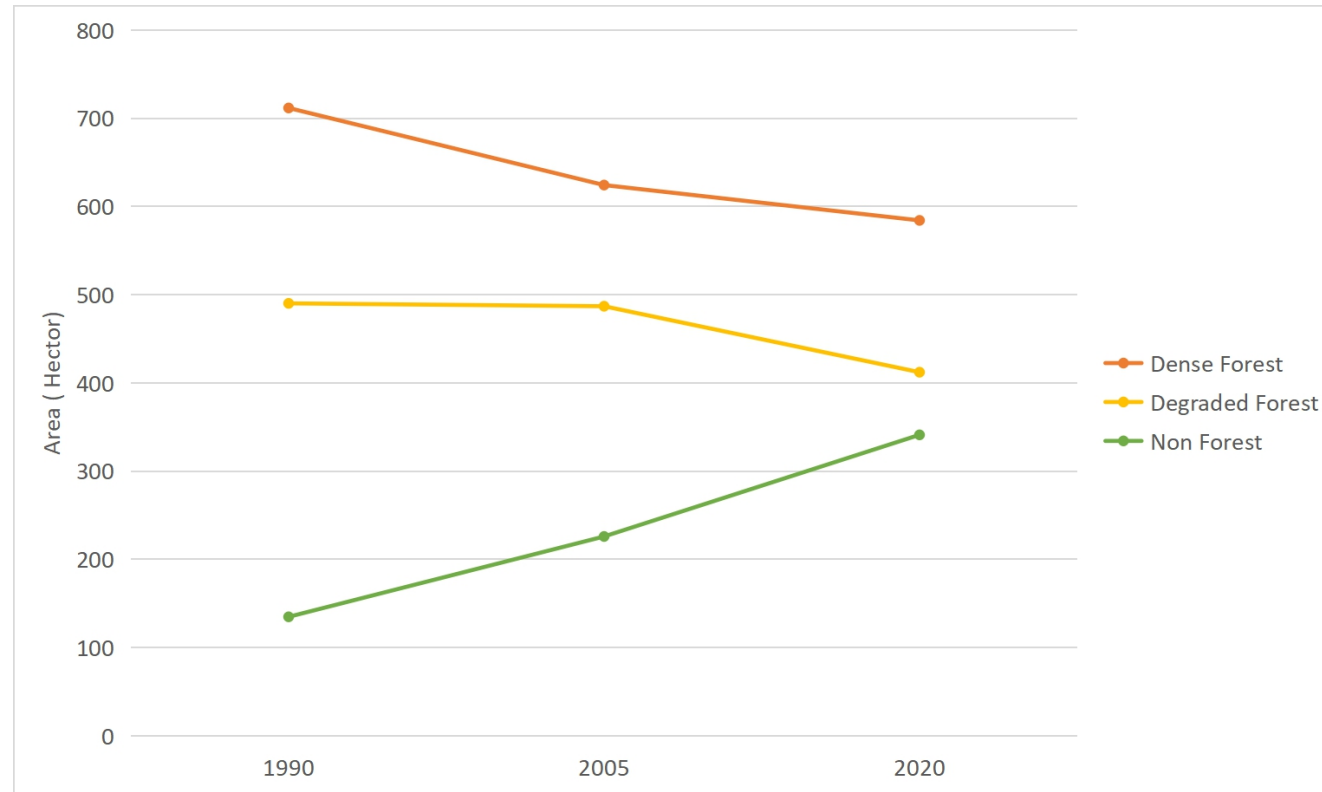


(b) 2005;



(c) 2020

# Results and Discussion



Trend of forest cover area in three time period.



# Conclusions

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- In the last 30 years, the forest had undergone with continuous and significant decline of its cover.
- Leading towards unsustainable forest regarding ecosystem services and functions.
- Activities of Forest Department needs rethinking to control the ongoing declination of forest cover in the Fasiakhali Wildlife Sanctuary.

# Acknowledgement

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Thanks