

# Jyotish Ranjan Deka

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## Research Interest

Conservation Biogeography	Climate Change	Ecological Modelling	Large mammal
Connectivity Conservation	Landscape Ecology	Remote Sensing & GIS	Conservation Planning

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## Educations

### University of Wisconsin-Madison

PhD, Department of Forest & Wildlife Ecology

Madison, US

Sep. 2023- Present

### Sikkim University

Masters in Geography, Department of Geography

Sikkim, IN

June, 2016- July, 2018

**Specialization:** Biogeography, Animal Geography, and RS& GIS

**Dissertation title:** Human-Leopard Conflict in the Urban Forest Area of Kamrup Metropolitan District, Assam

**Award:** Merit-cum-Mean Scholarship (**\$1010**)

### Gauhati University

Bachelors in Geography, Department of Geography

Assam, IN

Aug. 2013- June 2016

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## Professional Experiences

### Wildlife Institute of India

*Project Fellow*

Dehradun, IN

Nov. 2019-Present

Ecological Niche Modelling, Vegetation survey, Line transects, Habitat survey, Camera trapping, Connectivity modelling, Land use modelling, Large carnivores and Herbivores, Report writing, Publications

### Aaranyak

*GIS Assistant*

Assam, IN

Oct. 2018-Nov. 2019

Land-use modelling, Species habitat evaluation, Guest Faculty, Trainer in short GIS courses

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## Research Experiences

### University of Wisconsin-Madison

*Graduate Research Assistant*

Madison, US

Sep. 2023-Present

Conservation planning for large mammals in the East Himalayan region under Anthropocene epoch

- Corridor connectivity, Movement ecology, Transboundary conservation under climate change, Bengal tiger

### Wildlife Institute of India,

*Project Fellow*

Dehradun, IN

Nov. 2019-Aug.2023

- Habitat evaluation of Herbivores and Carnivores in Kaziranga National Park & Tiger Reserve, Assam
- Understanding the distribution potentiality of Tigers in Northeast India using Ecological Niche Modeling
- Multi-species biological invasion of invasive species under global climate change
- Land use land cover Kaziranga-Karbi Anglong Landscape using Google Earth Engine
- Connecting the Dots: Finding dispersal corridors for tiger in Kaziranga-Karbi Anglong Landscape
- Distribution of the Endangered White Winged Wood duck (*Asarcornis scutulata*, 1882) under different climate scenario in North East India (In collaboration Aaranyak and Assam University)

### Aaranyak

*GIS Assistant*

Assam, IN

Oct. 2018-Nov. 2019

- Habitat evolution of Western Hoolock Gibbon (*Hoolock hoolock*) in Doomdoma Forest Divisions, Assam
- Road ecology: Assessments of Road kill on NH-37, Kaziranga National Park, India
- Land-use land-cover of Manas National Park: Assessing the change in grassland habitat over a period of 31 years.
- Distribution of the Endangered Hog deer (*Axis porcinus*) in Manas National Park, India
- Land-use land-cover of selected Protected Areas of Northeast India and Brahmaputra Valley

**Sikkim University***Graduate student***Sikkim, IN**

June 2016- July 2018

- Human-leopard conflict in urban forest areas of Kamrup Metropolitan district, Assam
- Critical contemporary environment and development challenges in the Dooars region of West Bengal

**Gauhati University***Undergraduate student***Assam, IN**

Aug. 2013- June 2016

- Historical ponds of Darrang district: Identification and mapping, their ecological relevance for management planning

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**Teaching and Leadership Experiences****Tata Institute of Social Sciences***Guest Faculty***Guwahati, IN**

Jan. 2019- Mar. 2019

- Remote sensing and GIS in Ecology, Department of Ecology, Environment and Sustainable development

**Aaranyak***Trainer, GIS course***Assam, IN**

Oct. 2018-Nov. 2019

- Applications of Remote sensing and GIS in wildlife conservation and management planning

**Prayaas Ela***Founder***Assam, IN**

Feb. 2014-Present

- Initiated to work in the mean for biodiversity conservation with GIS application
- Conducted baseline survey of historical ponds for biodiversity assessment

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**Publications*****Published Peer-Reviewed***

**Deka, J. R.**, Ali, S. Z., Ahamad, M., Borah, P., Gopi, G. V., Badola, R., Sharma, R., & Hussain, S. A. (2023). Can Bengal Tiger (*Panthera tigris tigris*) endure the future climate and land use change scenario in the East Himalayan Region? Perspective from a multiple model framework. *Ecology and Evolution*, 13, e10340. DOI: <https://doi.org/10.1002/ece3.10340>

**Deka, J. R.**, Hazarika, A., Boruah, A., Das, J. P., Tanti, R., & Hussain, S. A. (2022). The impact of climate change and potential distribution of the endangered white-winged wood duck (*Asarcornis scutulata*, 1882) in Indian eastern Himalaya. *Journal for Nature Conservation*, 70, 126279. DOI: <https://doi.org/10.1016/j.jnc.2022.126279>

Hazarika, A., **Deka, J. R.**, Majumdar, K., Barman, D., & Nath, A. J. (2022). Modelling Changes in Distribution of the Rheophytic Tree Species *Barringtonia Acutangula* (L.) Gaertn. Due to Climate Change. *Wetlands*, 42(7), 94. DOI: <https://doi.org/10.1007/s13157-022-01621-y>

Borah, P., **Deka, J.R.**, Ahmad, S.M, Sarma, R., Badola, R., Hussain, S.A., **2022**. First photographic evidence of Asiatic Black Bear (*Ursus thibetanus*) in Kaziranga Tiger Reserve, North-east India. *Journal of threatened taxa*, 14, 2, pp. 20677–20679. DOI: <https://doi.org/10.11609/jott.7660>

**Deka, J.R.**, Bordoloi, M.K., & Sarma, P.K., **2021**. Historical Ponds of Darrang District: Identification and Mapping, their Ecological Relevance for Management Planning. *International Journal of Geoheritage and Parks*. 9, 4, pp. 496-508 DOI: <https://doi.org/10.1016/j.ijgeop.2021.11.008>

Chetry, D., Phukan, M., Chetry, S., Baruah, B., **Deka, J.R.**, Das, A.K., Chetry, R., & Bhattacharjee, P. C., **2021**. The Eastern Hoolock Gibbon *Hoolock leuconedys* Population in Assam, India, is on the Verge of Extinction, *Primate Conservation*, 35.

### ***Under review***

Bania, J.K., **Deka, J. R.**, Hazarika, A., Das, A.K., Nath, A. J., & Sileshi, G.W. (**in revision**). Modelling habitat suitability for *Moringa oleifera* and *Moringa stenopetala* under current and future climate change scenarios. *Scientific report*.

**Deka, J.R.**, Lal, U., & Sarmah, P.K., (**in review**) Indian leopard: adaptation and conservation issues around urban forest areas in Assam, implication for management planning, *Urban Ecosystems*.

**Deka, J.R.**, Saeed, U., Das, R., Ali, Sk.Z., Sharma, R., & Hussain, S.A., (**in review**) Multispecies biological invasion under global climate change affects the integrity of Natural World Heritage site in the sub-Himalayan grassland ecosystems. *Biological invasions*.

Hazarika, A., **Deka, J. R.**, Majumdar, K., & Nath, A. J., (**in review**). Diversity, distribution, carbon storage and habitat suitability of threatened *Dipterocarpus* in Indian East Himalayan. *Conservation biology*.

### ***Poster-presentation***

**Deka, J.R.**, Lal, U., **2020**. Indian leopard: adaptation and conservation issues around Guwahati city in Assam, *Student Conference on Conservation Science-New York*. USA.

### ***Technical report***

LISA 2021. ANNEX 1: Kaziranga: Mitigating impacts to wildlife during the expansion of national highway 37 in Assam, India: SPATIAL ANALYSES OF LINEAR INFRASTRUCTURE THREATS TO BIODIVERSITY IN ASIA.

Wildlife Institute of India 2022. Connecting the dots: Finding dispersal corridor for tigers in Kaziranga-Karbi Anglong Landscape

Wildlife Institute of India 2021. Connecting the dots: Finding dispersal corridor for tigers in Kaziranga-Karbi Anglong Landscape

Wildlife Institute of India 2020. Connecting the dots: Finding dispersal corridor for tigers in Kaziranga-Karbi Anglong Landscape

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### **Skills and Interest**

**Technical Skills:** Proficient in R, ArcGIS, ERDAS, MaxEnt, Google Earth Engine, QGIS, MS Office, SPSS, Diva GIS, Remap, Grass GIS, SNAP, Web designing, Circuitscape, Least-cost path and Linkage mapper.

**Languages:** English (Full professional proficiency), Hindi (Full professional proficiency), and Assamese (Native)

**Field Skills:** Vegetation sampling, habitat data collection, camera trapping, line transects, social survey, focus group discussion, GPS.

**Organizations members:** IUCN World Commission on Protected Areas, IUCN Connectivity Conservation Specialist Group, IUCN Climate Change Specialist Group, IUCN Transboundary Conservation Specialist Group, IUCN Species Survival Commission.

**Interests:** Wildlife Photography, Hiking and trekking, Exploring Nature.

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### **Field Course**

**University of Washington and Gibbon Conservation Centre in Gibbon Wildlife Sanctuary** **2019**  
9th Annual Field Course in Conservation Biology & Global Health

**Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, China** **2021**  
13th Advanced Field Course in Ecology and Conservation

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## References

Anthony Paul Clevenger, PhD  
Research Wildlife Biologist  
Western Transportation Institute, Montana State University  
Harvie Heights, Alberta T1W 2W2 Canada  
Email: [apclevenger@gmail.com/tclevenger@montana.edu](mailto:apclevenger@gmail.com/tclevenger@montana.edu)

Syed Ainul Hussain, PhD/DSc  
Scientist G/Senior Professor  
Project Manager, NMCG-WII Ganga Biodiversity Project  
Wildlife Institute of India, Uttarakhand, INDIA  
Email: [ainul.hussain@gmail.com/hussainsyedainul@wii.gov.in](mailto:ainul.hussain@gmail.com/hussainsyedainul@wii.gov.in)

Uttam Lal, Ph.D.  
Assistant Professor  
Department of Geography, Sikkim University  
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*Jyotish Ranjan Deba*

updated on 10<sup>th</sup> Sept, 2023