

## PEER REVIEWED ARTICLES

### 2021

1. Ahirwal, Jitendra, Amitabha Nath, Biplab Brahma, Sourabh Deb, Uttam Kumar Sahoo, and **Arun Jyoti Nath\***. (2021). Patterns and Driving Factors of Biomass Carbon and Soil Organic Carbon Stock in the Indian Himalayan Region. *Science of the Total Environment* 770: 145292. <https://doi.org/10.1016/j.scitotenv.2021.145292>.
2. **Arun Jyoti Nath**, G.W. Sileshi, S.Y. Laskar et al., (2021). Quantifying carbon stocks and sequestration potential in agroforestry systems under divergent management scenarios relevant to India's Nationally Determined Contribution, *Journal of Cleaner Production*, <https://doi.org/10.1016/j.jclepro.2020.124831>
3. S.Y. Laskar, G.W. Sileshi, K. Pathak, **Arun Jyoti Nath\*** et al., (2021) Variations in soil organic carbon content with chronosequence, soil depth and aggregate size under shifting cultivation, *Science of the Total Environment*, <https://doi.org/10.1016/j.scitotenv.2020.143114>
4. Reshma Singh, Bandana Kurmi, Uttam Kumar Sahoo, Gudeta W. Sileshi, **Arun Jyoti Nath\***, Ashesh Kumar Das (2021). *Parkia roxburghii*, an underutilized tree bean for food, nutritional and regional climate security, *Trees, Forests and People*. 4:100065 <https://doi.org/10.1016/j.tfp.2021.100065>
5. Uttam Kumar Sahoo, **Arun Jyoti Nath**, K. Lalnunpuii (2021). Biomass estimation models, biomass storage and ecosystem carbon stock in sweet orange orchards: Implications for land use management. *Acta Ecologica Sinica*. <https://doi.org/10.1016/j.chnaes.2020.12.003>
6. Pator Singnar, Gudeta Weldesemayat Sileshi, Amitabha Nath, **Arun Jyoti Nath\***, Ashesh Kumar Das (2021). Modelling the scaling of belowground biomass with aboveground biomass in tropical bamboos. *Trees, Forests and People*. 3:100054. <https://doi.org/10.1016/j.tfp.2020.100054>

### 2020

7. Panna Chandra Nath, **Arun Jyoti Nath\***, Gudeta W. Sileshi, Ashesh Kumar Das (2020) Stand structure and functional attributes of agarwood (*Aquilaria malaccensis* Lam.) based smallholder farms in Northeast India. *Forest Trees and People* 2:1000027.

8. Sabina Yasmin Laskar, Gudeta Weldesemayat Sileshi, **Arun Jyoti Nath\***, Ashesh Kumar Das (2020) Allometric models for above and belowground biomass of wild Musa stands in tropical semi evergreen forests. *Global Ecology and Conservation* 24: e01208.
9. Rajashree Ray, Karabi Pathak, **Arun Jyoti Nath\***, Ashesh Kumar Das (2020) Are traditional bamboo products green? *Current Science*: 118 (9) 1339-1341.
10. Rinku Moni Kalita, Ashesh Kumar Das, Gudeta W. Sileshi &**Arun Jyoti Nath\*** (2020) Ecosystem carbon stocks in different aged tea agroforestry systems: implications for regional ecosystem management. *Tropical Ecology*<https://doi.org/10.1007/s42965-020-00084-8>.
11. Nirmal Debnath, **Arun Jyoti Nath\***, Demsai Reang, Ashesh Kumar Das (2020). Gregarious flowering in *Dendrocalamus longispathus* (Kurz) Kurz in North East India. *Indian Forester*, 146 (4) : 359-360, 2020.
12. Nirmal Debnath, Pushpita Kumari, H.B. Naithani, **Arun Jyoti Nath\***, Ashesh Kumar Das (2020) Gregarious Flowering in *Bambusa pallida* Munro from Assam, India. *Indian Forester*, 146 (7) : 653-654
13. Bandana Kurmi, **Arun Jyoti Nath\***, Rattan Lal, Ashesh Kumar Das (2020) Water stable aggregates and the associated active and recalcitrant carbon in soil under rubber plantation. *Science of The Total Environment* 703:135498.

## 2019

14. Venkatesh Paramesh, Vadivel Arunachalam, **Arun Jyoti Nath** (2019) Enhancing ecosystem services and energy use efficiency under organic and conventional nutrient management system to a sustainable arecanut based cropping system. *Energy* 187:1-10.
15. Rinku Moni Kalita, Ashesh Kumar Das, **Arun Jyoti Nath** (2019). Role of smallholder tea growers in carbon sink management. *Current Science*. 116 (9): 1560-1566.
16. Mukta Chandra Das, **Arun Jyoti Nath**, Ashesh Kumar (2019) Carbon storage in bamboo (*Schizostachyum dullooa*) forest of Barak Valley, Southern Assam. *Current Science*. 116 (10): 1631-1633.
17. Mukta Chandra Das, **Arun Jyoti Nath**, Ashesh Kumar (2019) Flowering pattern of *Schizostachyum dullooa*, a thin walled tropical bamboo and impact of flowering on regeneration of canopy trees in evergreen forest in North East India. *Tropical Ecology*. 60 (1): 105-113.

- 18.** Abul Fazal Mazumder, Ashesh Kumar Das, **Arun Jyoti Nath\*** (2019) Biomass storage and carbon sequestration in priority bamboo species in relation to village physiography. *International Journal of Ecology and Environmental Sciences* 45 (1): 85-95.
- 19.** **Arun Jyoti Nath\***, Brajesh Kumar Tiwari, Gudeta W Sileshi, Uttam Kumar Sahoo, Biplab Brahma, Sourabh Deb, Ningthoujam Bijayalaxmi Devi, Ashesh Kumar Das, Demsai Reang, Shiva Shankar Chaturvedi, Om Prakash Tripathi, Dhruba Jyoti Das, Asha Gupta (2019). Allometric Models for Estimation of Forest Biomass in North East India. *Forests* 10 (2), 103.

## 2018

- 20.** Karabi Pathak, **Arun Jyoti Nath\***, Ashesh Kumar Das, Mohan Bhar (2018) Litter dynamics in Imperata cylindrica grassland under culturally managed system in North East India. *Journal of Tropical Agriculture* 56 (2): 99-106.
- 21.** Karabi Pathak, Y Malhi, GW Sileshi, Ashesh Kumar Das, **Arun Jyoti Nath\*** (2018) Net ecosystem productivity and carbon dynamics of the traditionally managed Imperata grasslands of North East India. *Science of The Total Environment* 635, 1124-1131.
- 22.** **Arun Jyoti Nath\***, Rattan Lal, GW Sileshi, Ashesh Kumar Das (2018). Managing India's small landholder farms for food security and achieving the "4 per Thousand" target. *Science of the Total Environment* 634, 1024-1033.
- 23.** Biplab Brahma, **Arun Jyoti Nath\***, GW Sileshi, Ashesh Kumar Das (2018). Estimating biomass stocks and potential loss of biomass carbon through clear-felling of rubber plantations. *Biomass and Bioenergy* 115, 88-96.
- 24.** **Arun Jyoti Nath\***, GW Sileshi, Ashesh Kumar Das (2018). Bamboo based family forests offer opportunities for biomass production and carbon farming in North East India. *Land Use Policy* 75, 191-200.
- 25.** **Arun Jyoti Nath\***, Biplab Brahma, GW Sileshi, Ashesh Kumar Das (2018). Impact of land use changes on the storage of soil organic carbon in active and recalcitrant pools in a humid tropical region of India. *Science of The Total Environment* 624, 908-917.
- 26.** Mukta Chandra Das, Pator Singnar, **Arun Jyoti Nath** and Ashesh Kumar Das (2018) Flowering of Dendrocalamus hamiltonii in Northeast India during recent years. *NeBIO* 9(4): 304-306.

- 27.** B Borogayary, AK Das, **Arun Jyoti Nath** \* (2018). Vegetative and reproductive phenology of *Aquilaria malaccensis* Lam.(Agarwood) in Cachar District, Assam, India. Journal of Threatened Taxa 10 (8), 12064-12072.
- 28.** **Arun Jyoti Nath** \*, R Lal, AK Das (2018). Fired Bricks: CO<sub>2</sub> Emission and Food Insecurity. *Global Challenges* 2 (4), 1700115.
- 29.** AC Waikhom, **Arun Jyoti Nath** \*, PS Yadava (2018) Aboveground biomass and carbon stock in the largest sacred grove of Manipur, Northeast India. *Journal of forestry research* 29 (2), 425-428
- 30.** B Borogayary, AK Das, **Arun Jyoti Nath** (2018). Tree species composition and population structure of a secondary tropical evergreen forest in Cachar District, Assam. *Journal of Environmental Biology* 39 (1), 67-71 (IF: 0.60).
- 31.** Biplab Brahma, Karabi Pathak, Rattan Lal, B Kurmi, M Das, **Arun Jyoti Nath**\*, AK Das (2018). Ecosystem carbon sequestration through restoration of degraded lands in Northeast India. *Land Degradation and Development* 29 (1): 15-25.

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- 32.** B Brahma, GW Sileshi, **Arun Jyoti Nath**\*, AK Das (2017) Development and evaluation of robust tree biomass equations for rubber tree (*Hevea brasiliensis*) plantations in India. *Forest Ecosystems* 4 (1), 14.
- 33.** **Arun Jyoti Nath**, Lal, R. (2017) Managing tropical wetlands for advancing global rice production: Implications for land-use management. *Land Use Policy* 68:681-685.
- 34.** MC Das, B Gopakumar, MK Shameena, AJero-Mathu, **Arun Jyoti Nath**, AK Das (2017). Floral biology and pollen sterility in relation to seed set in *Bambusa balcooa*. *Journal of Tropical Forest Science* 29: 504–508.
- 35.** P Singnar, MC Das, GW Sileshi, B Brahma, **Arun Jyoti Nath**\*, AK Das (2017) Allometric scaling, biomass accumulation and carbon stocks in different aged stands of thin-walled bamboos *Schizostachyum dullooa*, *Pseudostachyum polymorphum* and *Melocanna baccifera*. *Forest Ecology and Management* 395: 81–91.
- 36.** K Pathak, **Arun Jyoti Nath**\*, GW Sileshi, R Lal, AK Das (2017) Annual fire practice enhances biomass production and impacts nutrient cycling in *Imperata* grasslands. *Land Degradation and Development*. 28 (5), 1763-1771.

- 37.** Arun Jyoti Nath\*, Rattan Lal (2017). Effects of tillage practices and land use management on soil aggregates and soil organic carbon in the North Appalachian Region, USA. *Pedosphere* 27(1): 172–174.
- 38.** S Nath, Arun Jyoti Nath\*, GW Sileshi, AK Das (2017). Biomass stocks and carbon storage in *Barringtoniaacutangula* floodplain forests in North East India. *Biomass and Bioenergy* 98:37-42.
- 39.** MC Das, P Singnar, Arun Jyoti Nath, AK Das. 2017a. Flowering in *Bambusa balcooa* Roxb.in Barak Valley of North East India. *Indian Forester* 143(2):180-181.
- 40.** MC Das, P Singnar, Arun Jyoti Nath, AK Das. 2017b. Sporadic flowering of *Bambusa vulgaris* Schard.ExWendl in Cachar district of Assam. *Indian Forester* 143(3):279-280.
- 41.** MC Das, P Singnar, Arun Jyoti Nath, AK Das. 2017c Sporadic flowering of *Dendrocalamus longispathus* (Kurz) in Barak Valley of Assam. *Indian Forester* 144 (6): 6147-615.

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- 42.** S Nath, Arun Jyoti Nath\*, GW Sileshi, AK Das(2016). Vegetative and reproductive phenology of a floodplain tree species *Barringtoniaacutangula* from North East India. *Journal of Environmental Biology*. 37 (2): 215-220.
- 43.** Arun Jyoti Nath\*, T Bhattacharyya, SK Ray, J Deka, AK Das, H Devi (2016). Assessment of rice farming management practices based on soil organic carbon pool analysis. *Tropical Ecology* 57(3): 607-611.
- 44.** Arun Jyoti Nath\*, Demsai Reang, Ashesh Kumar Das, Biplab Brahma and Milon Das (2016) Traditional practice of Paan Jhum cultivation among Khasia community in Barak valley, Assam. *Journal of Traditional and Folk Practices* 4: 96-99.
- 45.** Biplab Brahma, Arun Jyoti Nath\*, AK Das (2016). Managing rubber plantations for advancing climate change mitigation strategies. *Current Science*. 110 (10): 2015-2019.
- 46.** Arun Jyoti Nath\* (2016). Need for phytolith occluded carbon research in India. *Current Science*. 110 (11): 2046-2047.
- 47.** Arun Jyoti Nath\*, B Brahma, K Pathak, AK Das (2016). Why should we preserve wetlands? *Current Science*.110 (9): 1619-1620.

- 48.** Mukta Chandra Das, Arun Jyoti Nath and Ashesh Kumar Das (2016) Indigenous traditional knowledge in conservation and management of bamboos of Barak valley, Assam. *Journal of Traditional and Folk Practices* 4: 185-192.
- 49.** S Nath, Arun Jyoti Nath, AK Das (2016). Seed germination in *Barringtonia acutangula*: A floodplain tree from North East India. *International Journal of Ecology and Environmental Sciences*. 42 (1): 47-53.
- 50.** R Kalita, AK Das, Arun Jyoti Nath (2016) Assessment of soil organic carbon stock under tea agroforestry system in Barak Valley, North East India. *International Journal of Ecology and Environmental Sciences* 42 (2): 175-182.
- 51.** Arun Jyoti Nath, T Bhattacharyya, J Deka, AK Das, SK Ray (2016) Management effect on soil organic carbon pools in lowland rain-fed paddy growing soil. *Journal of Tropical Agriculture* 53 (2), 131-138.

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- 52.** S Nath, Arun Jyoti Nath, R Lal, AK Das (2015) Ecosystem-based adaptation to climate change: experience from smallholder floodplain forest management. *Advances in Forestry Letters*. 4:6- 12.
- 53.** Arun Jyoti Nath, R Lal, AK Das (2015) Grains for ecosystem carbon management in North East India. *Current Science*. 109:1187-1189.
- 54.** R Kalita, AK Das, Arun Jyoti Nath (2015) Allometric equations for estimating above- and belowground biomass in Tea (*Camellia sinensis* (L.) O. Kuntze) agroforestry system of Barak Valley, Assam, northeast India. *Biomass and Bioenergy* 83: 42-49.
- 55.** Arun Jyoti Nath, Rattan Lal, AK Das (2015) Ethnopedology and soil properties of bamboo (*Bambusa* sp.) based agroforestry system in North East India. *Catena*. 135:92-99.
- 56.** Arun Jyoti Nath, Rattan Lal, AK Das (2015) Ethnopedology and soil quality of bamboo (*Bambusa* sp.) based agroforestry system. *Science of the Total Environment*. 521-522: 372–379.
- 57.** Arun Jyoti Nath, Rattan Lal, AK Das (2015) Managing woody bamboos for carbon farming and carbon trading. *Global Ecology and Conservation* 3: 654-663.

58. K Majumder, **Arun Jyoti Nath, AK Gupta**, BK Datta (2015) Bamboo invasion: threat to primate conservation in North East India. *Current Science*.108 (11):1969-1971.
59. Karabi Pathak, **Arun Jyoti Nath, AK Das** (2015) *Imperata* grasslands: carbon source or sink? *Current Science*. 108 (12):2250-2253.
60. P Singnar, **Arun Jyoti Nath, AK Das** (2015) Culm characteristics and volume weight relationship of a forest bamboo (*Melocanna baccifera*) from North east India. *Journal of Forestry Research*. 26 (4): 841-849.
61. MC Das, **Arun Jyoti Nath, AK Das** (2015) Mensurational studies on *Schizostachyum dullooa*-a thin walled tropical clump forming bamboo. *Journal of Bamboo and Rattan* 14 (1/4), 63-73.

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62. RM Kalita, AK Das, **Arun Jyoti Nath** (2014) Comparative study on growth performance of two shade trees in tea agroforestry system. *Journal of Environmental Biology* 35 (4), 699-702.
63. G Das, **Arun Jyoti Nath, AK Das** (2014) Nonlinear Statistical Model for Characterizing Culm Growth of *Bambusa cacharensis*. *International Journal of Ecology and Environmental Sciences* 40 (1), 41-47.
64. **Arun Jyoti Nath\***, MC Das, Ashesh Kumar Das (2014). Gregarious flowering in woody bamboos: does it mean end of life?*Current Science* 106 (1), 12-13.
65. MC Das, S Pator, **Arun Jyoti Nath, AK Das** (2014) Gregarious flowering in a climbing bamboo *Melocalamus compactiflorus* in Assam. *Indian Forester* 140 (9), 935-936.

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66. N Bora, **Arun Jyoti Nath, AK Das** (2013) Aboveground biomass and carbon stocks of tree species in tropical forests of Cachar District, Assam, northeast India. *International Journal of Ecology and Environmental Sciences* 39 (2), 97-106.

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67. **Arun Jyoti Nath\***, AK Das (2012) Carbon pool and sequestration potential of village bamboos in the agroforestry system of northeast India. *Tropical Ecology* 53 (3), 287-293.

- 68.** Arun Jyoti Nath, DC Franklin, MJ Lawes, MC Das, AK Das (2012) Impact of culm harvest on seed production in a Monocarpic Bamboo. *Biotropica* 44 (5), 699-704.
- 69.** Arun Jyoti Nath, AK Das (2012) Ecological implications of village bamboo as global climate change mitigation strategy: A case study in Barak Valley, Assam, North East India. *International Journal of Climate Change Strategies and Management* 4 (2), 201-215.
- 70.** Arun Jyoti Nath, AK Das (2012) Litter fall dynamics in Village Bamboo Grove of Barak Valley, Assam. *International Journal of Ecology and Environmental Sciences* 38 (1), 1-8.

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- 71.** Arun Jyoti Nath, AK Das (2011) Decomposition dynamics of three priority bamboo species of homegardens in Barak Valley, Northeast India. *Tropical Ecology* 52 (3), 325-330.
- 72.** Arun Jyoti Nath, AK Das (2011) Population status and regeneration of a tropical clumping bamboo Schizostachyum dullooa under two management regimes. *Journal of Forestry Research* 22 (1), 43-46.
- 73.** Arun Jyoti Nath, AK Das (2011) Carbon storage and sequestration in bamboo-based smallholder homegardens of Barak Valley, Assam. *Current Science*, 101: 229-233.

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- 74.** Arun Jyoti Nath, AK Das (2010) Gregarious flowering of a long-lived tropical semelparous bamboo Schizostachyum dullooa in Assam. *Current Science* 99 (2), 154-155.
- 75.** Arun Jyoti Nath\*, A Raut, PP Bhattacharjee (2010) Traditional use of Barringtonia acutangula (L.) Gaertn. in fish farming in Chatla floodplain of Cachar, Assam. *Indian Journal of Traditional Knowledge* 9(3): 544-546.

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- 76.** Arun Jyoti Nath\*, G Das, AK Das (2009) Above ground standing biomass and carbon storage in village bamboos in North East India. *Biomass and Bioenergy* 33 (9), 1188-1196.
- 77.** Arun Jyoti Nath, G Das, AK Das (2009) Traditional knowledge base in the management of village bamboos: A case study in Barak Valley, Assam, Northeast India. *Indian Journal of Traditional Knowledge* 8(2): 162-168.

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- 78.** Arun Jyoti Nath, G Das, AK DAS (2008) Above ground biomass, production and carbon sequestration in farmer managed village bamboo grove in Assam, northeast India. *Journal of American Bamboo Society* 21(1): 32-40
- 79.** Arun Jyoti Nath, G Das, AK DAS (2008) Vegetative phenology of three bamboo species in subtropical humid climate of Assam. *Tropical Ecology* 49 (1), 85-89.
- 80.** Arun Jyoti Nath, AK Das (2008) Bamboo resources in the homegardens of Assam: A case study from Barak Valley. *Journal of Tropical Agriculture* 46, 58-61.

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- 81.** Arun Jyoti Nath, G Das, AK Das (2007) Culm characteristics and population structure of dolu bamboo *Schizostachyum dullooa* Nees (Gamble) Majumder in Barak Valley, Northeast India, need for conservation and implication for management. *Journal of American Bamboo Society* 20:15–20.

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- 82.** Arun Jyoti Nath, G Das, AK Das (2006) Population structure and culm production of bamboos under traditional harvest regimes in Assam, Northeast India. *Journal of Bamboo and Rattan* 5 (1-2), 79-88.

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### III. ELECTRONIC PUBLICATIONS

- 84.** Sileshi GW, Nath, AJ (2017) *Carbon farming with bamboos in Africa: A call for action.* A discussion paper. DOI: [10.13140/RG.2.2.34366.89926](https://doi.org/10.13140/RG.2.2.34366.89926).

### IV. BOOK ARTICLES

- 85.** Arun Jyoti Nath, Biplab Brahma, Rattan Lal and Ashesh Kumar Das (2016) Soil and Jhum Cultivation. Encyclopaedia of Soil Science, Third Edition DOI: 10.1081/E-ESS3-120053748.
- 86.** Arun Jyoti Nath, Ashesh Kumar Das and Rattan Lal (2016) Soil quality and village bamboos. Encyclopaedia of Soil Science, Third Edition DOI: 10.1081/E-ESS3-120053710.
- 87.** Arun Jyoti Nath, U. K. Sahoo, Krishna Giri, G. W. Sileshi, and A. K. Das (2020) Incentivizing Hill Farmers for Promoting Agroforestry as an Alternative to Shifting

Cultivation in Northeast India. J. C. Dagar et al. (eds.), Agroforestry for Degraded Landscapes, Springer Nature Singapore Pte Ltd. <https://doi.org/10.1007/978-981-15-4136-0-14>

88. W. G. Sileshi, P. L. Mafongoya, and **Arun Jyoti Nath** (2020) Agroforestry Systems for Improving Nutrient Recycling and Soil Fertility on Degraded Lands. J. C. Dagar et al. (eds.), Agroforestry for Degraded Landscapes, Springer Nature Singapore Pte Ltd. [https://doi.org/10.1007/978-981-15-4136-0\\_8](https://doi.org/10.1007/978-981-15-4136-0_8)