Received: 1 August 2020 | Revised: 8 January 2021 | Accepted: 18 April 2021

DOI: 10.1111/csp2.466

Conservation Science and Practice
A journal of the Society for Conservation Biology
Open Access
WILEY

EVIDENCE

A biodiversity hotspot in turmoil: Doing away with circular 5/2001 could have catastrophic consequences for Sri Lanka's forests

Dinal J. S. Samarasinghe[1] | **Eric D. Wikramanayake**[1,2] | **Sevvandi Jayakody**[1] | **Suranjan Fernando**[1] | **Jagath Gunawardana**[1] | **Alexander Braczkowski**[3,4]

[1]Environmental Foundation (Guaranteed) Limited, Kirulapone, Colombo, Sri Lanka

[2]WWF Hong Kong, Kwai Chung, Hong Kong

[3]Centre for Planetary Health and Food Security, Griffith University, Nathan, Queensland, Australia

[4]School of Natural Resource Management, Nelson Mandela University, George, South Africa

Correspondence
Dinal J. S. Samarasinghe, Environmental Foundation (Guaranteed) Limited, No. 3A, 1st Lane, Kirulapone Colombo 05, Sri Lanka.
Email: dinal.salvator@gmail.com

Abstract

In 2017, Sri Lanka set a goal to increase its forest cover to 32% by 2030 (Sri Lanka UN-REDD, 2017). However, on November 4th 2020, the government published circular MWFC/1/2020 revoking the circular 5/2001 of August 10th 2001, one of the country's most crucial forest protection directives. The revocation of the 5/2001 circular could severely hamper this target, posing a threat of deforestation to a variety of ecosystems which are not part of any formally designated protected areas (PA) in Sri Lanka, also known as Other State Forests. This includes forested areas adjoining PAs which are crucial for habitat connectivity and standalone state forest lands. Such a retrograde step could have potentially catastrophic ramifications on Sri Lanka's declining forest cover. It would also severely weaken the country's commitments to inter alia, the UNREDD Programme, Kyoto protocol and CBD. We therefore call on the Government of Sri Lanka to urgently reconsider and reverse this decision.

KEYWORDS

biodiversity, biodiversity hotspot, deforestation, forest cover, Sri Lanka

In 2017, Sri Lanka set a goal to increase its forest cover to 32% by 2030 (Sri Lanka UN-REDD, 2017). However, on July 2nd 2020, a cabinet decision was made requesting the Minister of Forestry Resources and Environment to reverse the directives prescribed by the 5/2001

circular, one of the country's most crucial forest protection legislations (Department of Government Information, 2020). The decision came into force after circular MWFC/1/2020 was published on the November 4th 2020 revoking circulars 05/98, 5/2001, and 02/2006. This decision could severely hamper forest and biodiversity conservation targets in Sri Lanka, posing a threat of deforestation to a variety of ecosystems which are not part of any formally designated protected areas (PA) in Sri Lanka. These are referred to as Other State Forests (OSF) and include unprotected forested areas adjoining PAs which are crucial for habitat connectivity and constitute sizeable standalone state forest patches of which some are proposed reserves. The standalone coverage of OSF land is ca. 338,229-ha (ca. 5% of the island's land mass), equivalent to at least ca. 89 million metric tons of CO_2 emissions. The broader forested area including OSFs which are connected to PAs is

estimated to be 772,379 ha (Forest Department Sri Lanka pers.com; Figure 1) which is ca. 11.8% of the total land mass. Such a retrograde step could have potentially catastrophic ramifications for Sri Lanka's declining forest cover. It would also severely weaken the country's commitments to inter alia, the UN-REDD Programme, Kyoto protocol and Convention on Biological Diversity (CBD). This action would also jeopardize critical habitats of the majority of the country's endemic species with constrained range distributions, species that have global tourism appeal (e.g., the Sri Lankan leopard *Panthera pardus kotiya* and Sri Lankan elephant *Elephas maximus maximus*), pollinators, watersheds and the ecosystem services associated with this habitat (Green & Gunawardena, 1997). For example, much of high-density elephant habitat is located in OSF's as these forest stands are of mixed age, and are often composed of

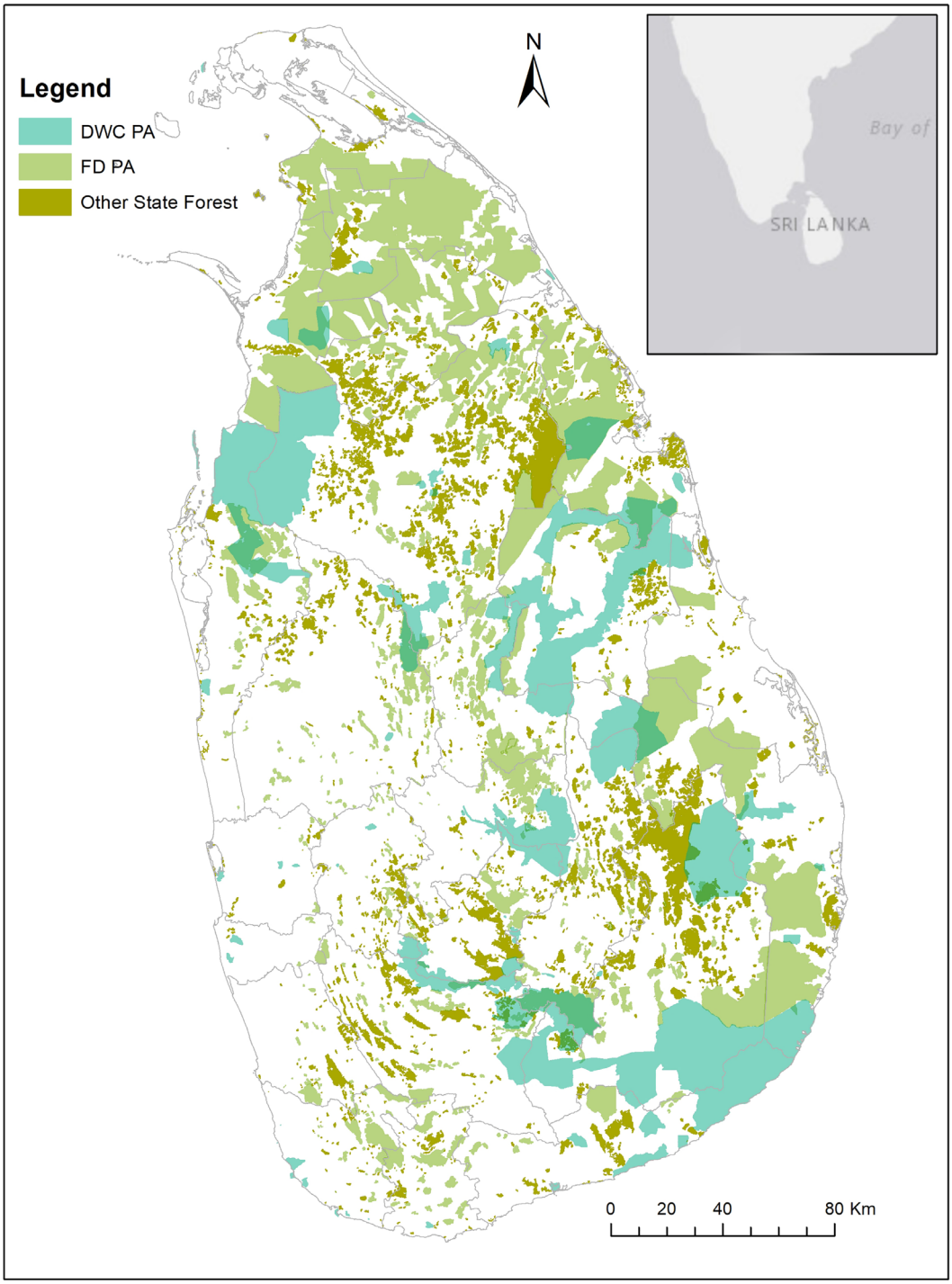

FIGURE 1 Forest cover in Sri Lanka (DWC PA, protected area under the Department of Wildlife Conservation; FD PA, protected area under the Department of Forest Conservation). Reproduced from MoMD&E (2019)

grassland and matrix habitats (Fernando, 2015). This contrasts with land under protection of the Department of Wildlife Conservation which is typically mature forest or undergoing succession (Fernando, 2015).

The 05/2001 circular is a key policy directive issued by the Ministry of Environment in August 2001, which offers protection to OSFs under section 20 of the Forest Conservation Ordinance. This transfer of jurisdiction from the District Secretariats to the Forest Department has prevented their release to non-state entities for conversion to other land uses, and instead, facilitated a protocol involving the approval from the Conservator General of the Forest Department, inter-ministerial committee, and an environmental impact assessment before any land transformation to agricultural land or other development activities. This Circular has thus protected critical forest habitat, and assisted in the establishment of new protected areas, contributed to ecological connectivity of forested landscapes, discovery of new endemic

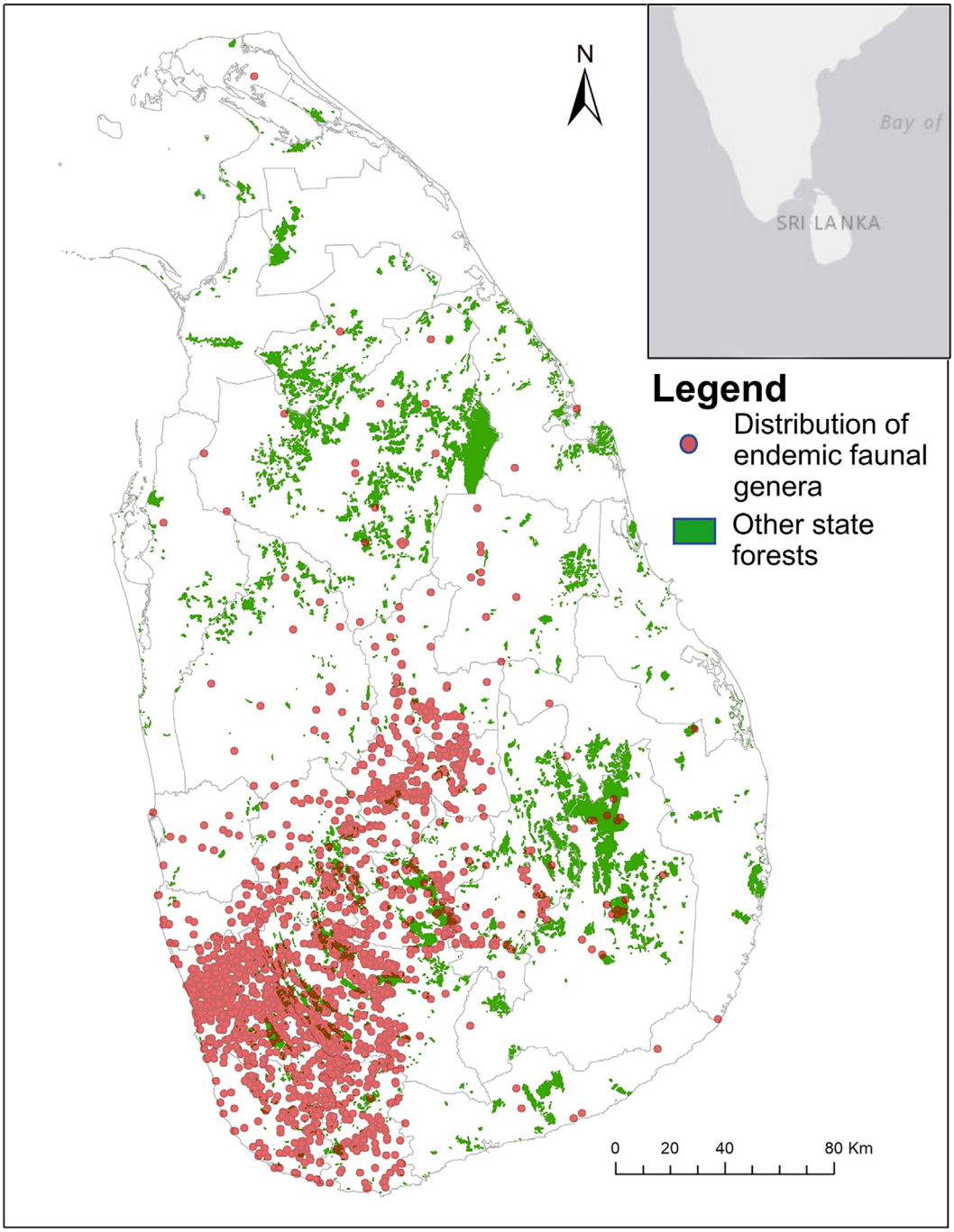

FIGURE 2 Distribution of endemic faunal genera of Sri Lanka (OSF, other state forests). Reproduced from MoMD&E (2019)

species, thwarted illegal wildlife smuggling and assisted in providing valuable ecosystem services for human communities (pers obs. Sevvandi Jayakody).

Sri Lanka together with the Western Ghats of India, is also one of the 36 global biodiversity hotspots (Myers, Mittermeier, Mittermeier, Da Fonseca, & Kent, 2000) and features remarkable levels of biological diversity (722 species of freshwater fish, amphibians, reptiles, birds and mammals with 49% endemism [MoMD&E, 2019]) despite a small land surface area (65,556 km^2). The majority of the country's endemic faunal species are confined to the highly fragmented forests of the wet zone (ca. 15,000 km^2; elevation ranging from 0 to 2,525 m above sea level) (Figure 2) (Peabotuwage et al., 2012). The sub montane and montane area of the wet zone provides crucial ecosystem services, including key watershed areas nourishing large rivers in the country. Over the past 150 years, this area underwent severe deforestation (Reddy, Manaswini, Jha, Diwakar, & Dadhwal, 2017). In the sub montane and montane zone of Sri Lanka, 9% of the area is comprised of OSFs. Similarly, the fog interception zone of Sri Lanka (>1,500 m), is ca. 77,899 ha and 18% belong to OSFs. Apart from three major forest clusters namely, Peak Wilderness protected area complex, Knuckles protected area complex and Sinharaja World Heritage Site, the remainders form about 60 fragments of <ca. 500 ha each (Pethiyagoda, Manamendra-Arachchi, & Meegaskumbura, 2014). Most of these forests belong to OSFs, and >20% of total forest cover in six districts of the wet zone are comprised of OSFs. The revocation of the 5/2001 circular will most likely increase rates of fragmentation as the OSFs are converted to other land uses (Figure 1).

Importantly, the recent revocation of the 5/2001 circular occurred swiftly, with no public stakeholder participation or consultation from any public institution. Moreover, this action took place when the country was undergoing curfew during a global pandemic affected by the spreading of the COVID-19 disease. We therefore call on the Government of Sri Lanka to urgently reconsider and reverse this decision in order to adhere to the targets it has made in the National Biodiversity Strategy and Action Plan, and Nationally Determined Contributions made to the Paris CoP, and Bonn Challenge commitments prior to divesting forest lands for other land uses. The economic targets set by the country can only be achieved with the wise use of its natural capital.

ACKNOWLEDGMENTS

We would like to extend our gratitude to Dr. Mark Schwartz and Dr. Carly Cook of the editorial team of Conservation Science and Practice for their support and an anonymous reviewer for valuable comments that helped improve our manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

All authors conceived of and wrote the article.

ORCID

Dinal J. S. Samarasinghe https://orcid.org/0000-0003-3482-799X
Eric D. Wikramanayake https://orcid.org/0000-0002-1373-6952
Sevvandi Jayakody https://orcid.org/0000-0001-9600-4986
Alexander Braczkowski https://orcid.org/0000-0002-0099-7803

REFERENCES

Circular No. 5/2001 of 10 August (2001) on "Assignment of Management and Control of all other State Lands with the Conservator General of Forests" of the Secretary to the Ministry of Forest Resources and Environment. Sri Lanka.

Department of Government Information. (2020). The need to transfer the lands, which are considered as state residual forests to district/divisional secretaries. Retrieved from https://www.dgi.gov.lk/news/cabinet-decisions/2057-cabinet-decisions-2020-07-02.

Fernando, P. (2015). Managing elephants in Sri Lanka: Where we are and where we need to be. *Ceylon Journal of Science (Biological Sciences)*, *44*(1), 1.

Circular No. MWFC/1/2020 of 4 November (2020) on "Management of other state forests" Ministry of Wildlife and Forest Conservation. Sri Lanka.

MoMD&E. (2019). *Biodiversity Profile – Sri Lanka, Sixth National Report to the Convention on Biological Diversity* (p. 200). Sri Lanka: Biodiversity Secretariat, Ministry of Mahaweli Development and Environment.

Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, *403*(6772), 853–858.

Green, M.J.B., & Gunawardena, E.R.N. (1997). *Designing an optimum protected areas system for Sri Lanka's natural forests*. (p, 399). Colombo: Forest Department Ministry of Lands, Agriculture and Forestry.

Peabotuwage, I., Bandara, I. N., Samarasinghe, D., Perera, N., Madawala, M., Amarasinghe, C., … Karunarathna, D. M. S. S. (2012). Range extension for *Duttaphrynus kotagamai* (Amphibia: Bufonidae) and a preliminary checklist of herpetofauna from the Uda Mäliboda Trail in Samanala Nature Reserve, Sri Lanka. *Amphibian and Reptile Conservation*, *5*(2), 52–64.

Pethiyagoda, R., Manamendra-Arachchi, K., & Meegaskumbura, M. (2014). Sri Lankan amphibians: Extinctions and

endangerment. In *Conservation biology of amphibians of Asia: Status of conservation and decline of amphibian: Eastern hemisphere*. Kota Kinabalu: Natural History Publications (Borneo).

Reddy, C. S., Manaswini, G., Jha, C. S., Diwakar, P. G., & Dadhwal, V. K. (2017). Development of national database on long-term deforestation in Sri Lanka. *Journal of the Indian Society of Remote Sensing*, *45*(5), 825–836.

Sri Lanka UN-REDD. (2017). Sri Lanka's Forest Reference Level submission to the UNFCCC. Retrieved from https://redd.unfccc.int/files/sl_frl_modified_submission_november_2017.pdf.

How to cite this article: Samarasinghe, D. J. S., Wikramanayake, E. D., Jayakody, S., Fernando, S., Gunawardana, J., & Braczkowski, A. (2021). A biodiversity hotspot in turmoil: Doing away with circular 5/2001 could have catastrophic consequences for Sri Lanka's forests. *Conservation Science and Practice*, e466. https://doi.org/10.1111/csp2.466