

Indonesia. The project has developed a sustainable conservation scheme by promoting shade grown coffee as a commodity to improve livelihoods and involve the local community in gibbon conservation. It is located in the c. 81 km<sup>2</sup> Petungkriyono forest in the Dieng landscape, which has the highest recorded density of the Javan gibbon (2.5–7.6 individuals/km<sup>2</sup>), with a total population of c. 881 (Setiawan et al., 2012, *Biodiversitas*, 13, 23–27). Coffee production, although on a small scale, has been a useful way to promote the Javan gibbon amongst consumers in both local and regional markets. Owa Coffee is recognized locally as a sustainable commodity that also has a wildlife conservation message. In regional markets, this gibbon friendly coffee has been promoted in collaboration with Wildlife Reserves Singapore. Since 2016, export of the coffee to Singapore has raised USD 10,000–15,000 annually to support community conservation activities in Petungkriyono forest and its surrounding villages through participation in coffee production and forest protection. Owa coffee now brings pride and motivation to the communities, as they recognize the added value brought by the Javan gibbon to the commodity they produce.

However, since March 2020 the coffee supply chain has been disrupted by the uncertain market conditions resulting from the COVID-19 pandemic, and the closure of a cafe in Singapore that was one of the most important Owa Coffee outlets has resulted in a decline in demand for the coffee. With conservation funds from the export of the coffee no longer available, there have been impacts on community development activities that relied on the project. Typically, communities working with agroforestry have the capacity to survive such situations by relying on the food commodities they produce themselves. However, in this case the cessation of coffee sales has had an impact on the income of the local community. From this experience, the Coffee and Primate Conservation Project has recognized that it is important to consider the choice of agroforest commodities based on their resilience and to reduce dependency on a single commodity. Other forest products will need to be developed that have added conservation value.

ARIF SETIAWAN (ORCID [orcid.org/0000-0002-6090-906X](https://orcid.org/0000-0002-6090-906X)) Kalitirto, Berbah, Sleman, Yogyakarta, Indonesia  
E-mail [a.setiawan@swaraowa.org](mailto:a.setiawan@swaraowa.org)

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)

## Assessing protected area effectiveness

The Management Effectiveness Tracking Tool (METT), a simple assessment system for protected and conserved

areas, was relaunched in a 4th edition in December 2020. This new edition has updated questions and a spreadsheet tool to streamline implementation and compilation of results. Originally published in 2002, METT is aimed principally at tracking progress in individual protected areas over time. It was one of the first tools developed using the IUCN World Commission on Protected Areas (WCPA) framework for assessing protected area management effectiveness. The tool was developed by the World Bank/WWF Alliance for Forest Conservation and Sustainable Use and has been applied in at least 127 countries. Several editions have been produced, reflecting lessons learned, and it has been adapted at national level by several countries. The tool has two main sections. Datasheets collect key information on the protected area, its characteristics, main conservation values, any threats, and management objectives, and details of who completed the assessment. An assessment form provides a composite measurement across 38 questions integrating all six components of the WCPA framework. Within each of these questions, performance is assessed against four grading statements representing standards of management from poor to very good. Each question has data fields for details of evidence that supports the assessment, steps to improve management if necessary, and details of information sources used in making the evaluation. Additional worksheets in METT-4 facilitate more detailed assessments of community relations, planning processes, condition of natural and cultural values, key species and habitats. Results of the assessment are presented in a dashboard summarizing the key results. The tool, and associated capacity-building material, is available at [protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame](https://protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame).

MARC HOCKINGS (ORCID [orcid.org/0000-0003-4419-8963](https://orcid.org/0000-0003-4419-8963))  
World Commission on Protected Areas, and School of Earth and Environmental Sciences, University of Queensland, St Lucia, Brisbane, Australia  
E-mail [marc@paconservation.com](mailto:marc@paconservation.com)

NIGEL DUDLEY (ORCID [orcid.org/0000-0001-7068-0468](https://orcid.org/0000-0001-7068-0468)) and  
SUE STOLTON World Commission on Protected Areas, and Equilibrium Research, Bristol, UK

M.K.S. PASHA Conservation Assured (Tiger Standards), and WWF Singapore, Singapore

PAUL VAN NIMWEGEN IUCN, Fiji

This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)