

Strengthening capacity for species conservation in South-east Asia: a provisional assessment of needs and opportunities for the Asian Species Action Partnership

NERISSA CHAO, THIRZA A. C. LOFFELD, KATE MASTRO
DANIEL H. A. WILLCOX, VICKI GUTHRIE and MADHU RAO

Abstract South-east Asia is home to exceptional biodiversity, but threats to vertebrate species are disproportionately high in this region. The IUCN Species Survival Commission Asian Species Action Partnership aims to avert species extinctions. Strengthening individual and organizational capacity is key to achieving long-term, sustainable conservation impact, and is a core strategic intervention for the Partnership. To look at the needs and opportunities for developing capacity for species conservation in South-east Asia, we undertook a needs assessment with organizations implementing species conservation within this region. We conducted a review of available training opportunities, mapping them against a list of identified competences needed for species conservation to determine gaps in current training. Our assessments revealed an imbalance in the focus of training opportunities vs the actual competences needed for effective species conservation, and that training opportunities within South-east Asia are limited in number and highly competitive. These findings corroborate other similar reviews, particularly on capacity gaps in the Global South. We discuss the implications of our review and use the findings to generate recommendations.

Keywords Asian Species Action Partnership, capacity development, competence framework, professional development, resilience, South-east Asia, species conservation, training

Supplementary material for this article is available at doi.org/10.1017/S0030605321001010

NERISSA CHAO (Corresponding author, orcid.org/0000-0002-9098-5987, nerissa.chao@asapspecies.org), DANIEL H. A. WILLCOX, VICKI GUTHRIE and MADHU RAO* (orcid.org/0000-0002-5360-4073) IUCN Species Survival Commission Asian Species Action Partnership, 80 Mandai Lake Road, 729826, Singapore

THIRZA A. C. LOFFELD (orcid.org/0000-0002-1531-1069) Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, UK

KATE MASTRO (orcid.org/0000-0001-6702-8137) Wildlife Conservation Society, New York, USA

*Also at: Wildlife Conservation Society, New York, USA

Received 14 January 2021. Revision requested 1 April 2021.

Accepted 23 July 2021. First published online 9 February 2022.

South-east Asia is globally important for biodiversity but there is a disproportionately high number of species facing serious risk of extinction (Duckworth et al., 2012). The IUCN Species Survival Commission Asian Species Action Partnership is a coalition of organizations that aim to catalyse conservation action to avert extinctions and promote recovery of Critically Endangered land and freshwater vertebrate species occurring in South-east Asia (ASAP, 2021). Strengthening individual and organizational capacity is a key pillar of the Partnership's strategy and a recognized priority for species conservation (Rodríguez et al., 2006), including within South-east Asia (e.g. CEPF, 2012).

Suitably trained conservation professionals, with the knowledge and skills to implement and manage conservation programmes effectively, are essential to avert extinctions (Rao et al., 2014). Finding and retaining such local personnel is a recognized challenge (Sanders et al., 2019). Reliance on external expertise without a focus on strengthening local and national capacity is known to impede conservation (de Vos, 2020).

We undertook a provisional assessment of current capacity development needs and opportunities for threatened species conservation in South-east Asia, to inform the Asian Species Action Partnership's capacity development strategy. The Partnership Secretariat (MR, NC, VG) administered an online questionnaire with 22 Partners in late 2018 to (1) determine self-identified priority competences requiring improvement, (2) identify major barriers to accessing relevant training, and (3) identify additional mechanisms to support training outcomes. The Secretariat also led a species conservation workshop with 38 conservation professionals at the IUCN Species Survival Commission Conservation Planning Specialist Group's annual meeting in Bangkok in late 2018, to identify positive characteristics and attributes perceived to be beneficial for conservationists.

Next, we developed a competence framework for species conservation, comprising data on the competences (knowledge, skills, abilities and other characteristics) needed by conservation professionals, based on Loffeld et al. (in press). The framework comprises three broad dimensions of work performance (Supplementary Table 1): task (core or technical competences central to their job), contextual (competences to support the psychological, social and

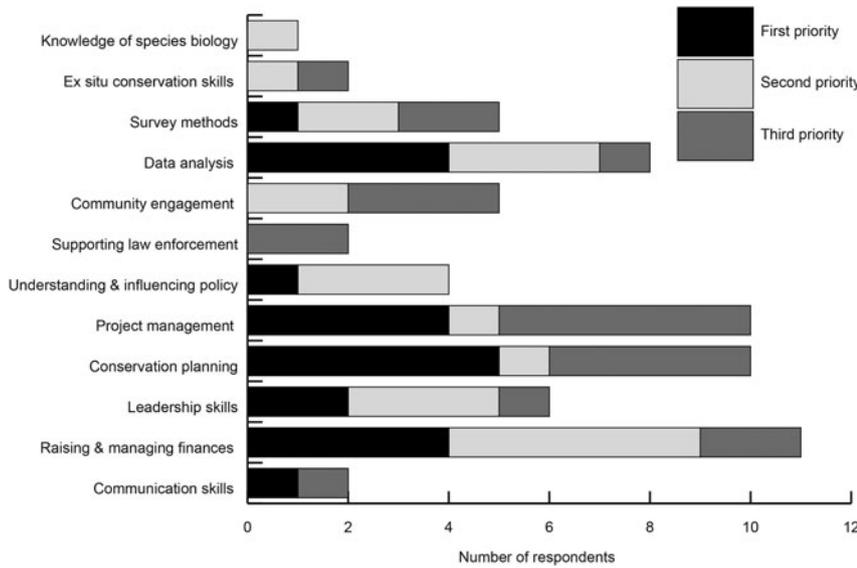


FIG. 1 Priority competences for improvement within an organization as identified by the 2018 Asian Species Action Partnership needs assessment.

organizational environment; e.g. interpersonal skills, leadership) and adaptive (ability to adapt to changes in work or environment; e.g. resilience, keeping knowledge and skills up to date, flexibility) competences (Koopmans, 2014; Loffeld et al., in press). We cross-checked this framework with a selection of relevant competences for species conservation in Appleton (2016), and this was further reviewed by six experts with conservation experience in South-east Asia.

We implemented a training provision assessment through desk-based research and consultation with conservationists in South-east Asia and capacity development specialists. Although not exhaustive, we identified the most relevant short-term training courses for species conservation (in English), excluding university degrees, and categorized them according to the competences or learning outcomes they addressed (Supplementary Table 1). We mapped these against the competences in the framework to understand patterns in coverage of competences and identify gaps in capacity development provision. Learning outcomes were confirmed by capacity development providers for courses where these were not explicitly articulated.

Results from the needs assessment showed a focus on task competences, with conservation planning identified as a high priority need, followed jointly by data analysis, project management, and raising and managing funds (Fig. 1). Grouping all top three priorities, raising and managing finances had the most responses (50%). Contextual competences (leadership, 27%; general communication skills, 9%) were considered low priority. Knowledge of species biology was considered the lowest priority. These priorities were identified during self-assessments by the respondents; it is unknown how their formal education level or subsequent professional development influenced the stated priorities.

Budget was found to be the biggest barrier to accessing training (95%), followed by time (71%), language (48%)

and location (43%). Short training courses (< 2 weeks) were identified as being highly preferred. Almost all respondents (94%) identified long-term mentoring support as a mechanism to strengthen training impact, followed by additional resources and materials (65%) and an online forum (41%). Results from the species conservation workshop showed that contextual competences (e.g. communication and leadership skills) were considered to be more important than technical skills in species conservation, and that training opportunities in both task and contextual competences, alongside long-term mentoring, were important mechanisms to increase impact.

Although not an exhaustive list, the mapping exercise identified 40 relevant training courses offered by 12 capacity development providers. Training focused predominantly on task competences (Supplementary Table 1), mainly the development of competences on species biology (33%), conservation research (33%), and planning (25%). Contextual competences were only mentioned in 20% of the assessed courses, except for communication skills (30%), and included leadership (20%), supervision and management (15%), and training others (12.5%). Adaptive competences were least focused on. Only four of the assessed courses mentioned keeping job knowledge and skills up to date and none included competences related to fostering resilience or flexibility.

Our findings show there is need for and interest in professional development for conservationists in South-east Asia, with the needs assessment prioritizing task competences around planning, management and financing, and the species conservation workshop highlighting the importance of contextual competences. This contrasts with the mapping exercise demonstrating that the primary focus of the assessed courses was species biology and conservation research, considered the lowest priority by participants of

the needs assessment. In line with previous studies, we found contextual competences were of lesser focus (Lucas et al., 2017; Elliott et al., 2018), with a mismatch between the training available and the diverse skills required for a career in conservation. Training often focuses on developing technical and science skills, with fewer opportunities for skills that are fundamental to plan and deliver conservation projects successfully. Some conservation professionals have a background in natural or environmental science. On entering the conservation profession, such individuals may lack the skills needed to address the complex economic, social and political challenges of conservation (Elliott et al., 2018), or the relevant skills and experience to manage and implement projects effectively (e.g. grant writing, managing staff, budgets; Sanders et al., 2019). Developing capacity in leadership and project management is needed to ensure conservationists are better equipped to deal with the challenges they face (Barlow et al., 2016; Black, 2019). Adaptive competences were rarely featured and, as far as we are aware, at the time of this assessment no training was available with a specific focus on building resilience, despite recent studies highlighting professional risks in conservation such as working in isolation (Loffeld et al., unpubl. data).

There are few opportunities within South-east Asia for face-to-face training of conservation professionals (Souter et al., 2017), with most courses being in non-Asian languages, and in English-speaking countries outside the region. Alongside additional barriers such as travel visas and language, this reinforces the main barriers to accessing training (i.e. cost, time) as identified in our assessment and by others (Barlow et al., 2016; Sanders et al., 2019). In addition, Barlow et al. (2016) found lack of institutional support to be a factor, and acknowledged the lack of available training courses in project management.

The training provision assessment indicated that a few organizations occasionally hold English-language, short conservation courses in South-east Asia, and other targeted courses for species conservation (e.g. Zoological Society of London EDGE Fellows, Conservation Leadership Programme), but these are restricted to grantees and are highly competitive. These also typically rotate between regions, with individuals from South-east Asia only eligible every few years.

Few organizations or networks share their needs assessments and there is consequently limited scholarship to draw examples from. The following nine recommendations, which are not based on quantitative data, as survey and workshop sample sizes were small and biased towards English speakers, are based on the findings from our assessment and on our own experiences in delivering training and/or support to South-east Asian nationals working in species conservation:

- (1) The COVID-19 pandemic has made way for more creative approaches to online learning, highlighting its value and opening more pathways for professional development in South-east Asia through cost-effective options to scale up training. This should be further expanded to provide new training in the region for the effective design and implementation of conservation solutions, using a mix of face-to-face and virtual training.
- (2) Training and skill development should focus on identified priority needs that are not currently met in the region; e.g. project management, raising and managing funds.
- (3) Regional training opportunities should be developed in local languages, to increase accessibility, but the need for enhanced English language skills as an enabling factor for further capacity development also needs to be recognized, to facilitate access to international opportunities.
- (4) Holistic approaches for capturing competences that span across task, contextual and adaptive work performance are needed to equip individuals with the diversity of competences required to deal with the complexity of contemporary conservation.
- (5) Short-term training courses should be combined with longer-term follow-up support, including mentoring and peer-to-peer learning, to enhance the application of newly acquired competences. New models and approaches are required to ensure there are financial support and resources to facilitate such longer-term mentoring and support.
- (6) Sharing and exchanging results of capacity needs assessments between capacity development providers, funders and conservation professionals could help to advance capacity development initiatives collectively. Encouraging a learning culture in conservation organizations, supported by adequate knowledge management systems, is vital for improvement of individual and organizational performance and to ensure transfer of individual learning outcomes to the wider organization.
- (7) We recommend assessing how effectively university and vocational training programmes in South-east Asia address the competences required for species conservation. Suitable courses should be established in the region, and collaborations and partnerships should be encouraged with relevant training providers and institutions from other regions that have long-term experience in course design, implementation and evaluation.
- (8) The COVID-19 pandemic, and its impacts on institutional funding for species conservation, has tested the financial resilience and adaptive management strategies of organizations. We recommend assessing and developing mechanisms to strengthen organizational capacity regionally, in particular around

financial sustainability, succession planning and resilience to deal with a changing environment.

- (9) Adequate resourcing and significantly increased financial investment in capacity development initiatives are needed to ensure such initiatives have the desired impact and are undertaken at the scale needed.

Despite the urgent need to conserve threatened vertebrate species in South-east Asia, there is a shortage of adequately skilled and experienced conservationists and few targeted training opportunities are available (Souter et al., 2017). Competition for places and high cost mean few individuals from the region can access existing training opportunities. National institutionalization of training courses can ensure both national ownership and long-term sustainability, and an increase in relevant courses through regional and national training institutions, in multiple languages, is essential.

Conservation action for species requires addressing near-term threats whilst also establishing mechanisms for long-term impact. Strengthening capacity in South-east Asia is required for sustained and effective species conservation. Using results from this study, the Asian Species Action Partnership Secretariat has started to facilitate training to support the partners by working with capacity development providers to offer courses in topics such as project management, leadership development and fundraising. Alongside this, we are developing mechanisms to provide bespoke and longer-term support (ASAP, 2021) and are in the process of developing a longer-term capacity development strategy to support our partners at both the individual and organizational level. We hope that by sharing our results and approach, this can serve as a starting point to advance capacity development initiatives collectively within South-east Asia and more widely.

Acknowledgements We thank all Asian Species Action Partnership Partners who participated in the questionnaire, and the following for their assistance: Mike Appleton, Sarah Brook, Will Duckworth, Tom Gray, Mirza Kusri, Stuart Paterson, Harmony Patricio, Beth Robinson and Cécile Tang. We appreciate the contribution of data on training opportunities by WWF's Russell E. Train Education for Nature, and financial assistance from Wildlife Reserves Singapore and an anonymous donor.

Author contributions Study conception and design: NC, MR; data collection: VG, TACL, KM; data analysis, writing: all authors.

Conflicts of interest None.

Ethical standards This research abided by the *Oryx* guidelines on ethical standards. The questionnaire was administered by the ASAP

Secretariat to guide ASAP's capacity development programme. This was not part of any formal research programme.

References

- APPLETON, M.R. (2016) *A Global Register of Competences for Protected Area Practitioners*. IUCN, Gland, Switzerland.
- ASAP (ASIAN SPECIES ACTION PARTNERSHIP) (2021) *Asian Species Action Partnership. Conserving Species on the Brink*. speciesonthebrink.org [accessed 20th April 2021].
- BARLOW, A., BARLOW, C.G., BODDAM-WHETHAM, L. & ROBINSON, B. (2016) A rapid assessment of the current status of project management skills in the conservation sector. *Journal for Nature Conservation*, 34, 126–132.
- BLACK, S.A. (2019) Psychological knowledge relevant to leadership in wildlife conservation. *Open Journal of Leadership*, 8, 114–141.
- CEPF (CRITICAL ECOSYSTEM PARTNERSHIP FUND) (2012) *Ecosystem Profile. Indo-Burma Biodiversity Hotspot*. 2011 update. Critical Ecosystem Partnership Fund, Washington, DC, USA.
- DE VOS, A. (2020) The problem of 'colonial science'. *Scientific American*, 1 July 2020. [scientificamerican.com/article/the-problem-of-colonial-science/?amp;text=The](https://www.scientificamerican.com/article/the-problem-of-colonial-science/?amp;text=The) [accessed 17 July 2020].
- DUCKWORTH, J.W., BATTERS, G., BELANT, J.L., BENNETT, E.L., BRUNNER, J., BURTON, J. et al. (2012) Why South-east Asia should be the world's priority for averting imminent species extinctions, and a call to join a developing cross-institutional programme to tackle this urgent issue. *Sapiens*, 5, 77–95.
- ELLIOTT, L., RYAN, M. & WYBORN, C. (2018) Global patterns in conservation capacity development. *Biological Conservation*, 221, 261–269.
- KOOPMANS, L. (2014) *Measuring individual work performance*. PhD thesis. Vrije Universiteit Amsterdam, Amsterdam, The Netherlands.
- LOFFELD, T.A.C., HUMLE, T., CHEYNE, S.M. & BLACK, S.A. (in press) Professional development in conservation: an effectiveness framework. *Oryx*, in press.
- LUCAS, J., GORA, E. & ALONSO, A. (2017) A view of the global conservation job market and how to succeed in it. *Conservation Biology*, 31, 1223–1231.
- RAO, M., JOHNSON, A., SPENCE, K., SYPASONG, A., BYNUM, N., STERLING, E. et al. (2014) Building capacity for protected area management in Lao PDR. *Environmental Management*, 53, 715–727.
- RODRÍGUEZ, J.P., RODRÍGUEZ-CLARK, K.M., OLIVEIRA-MIRANDA, M.A., GOOD, T. & GRAJAL, A. (2006) Professional capacity building: the missing agenda in conservation priority setting. *Conservation Biology*, 20, 1340.
- SANDERS, M.J., MILLER, L., BHAGWAT, S.A. & ROGERS, A. (2019) Conservation conversations: a typology of barriers to conservation success. *Oryx*, 55, 245–254.
- SOUTER, N., HUGHES, A., SAVINI, T., RAO, M., GOODALE, E., NICE, A. et al. (2017) Building conservation capacity in Southeast Asia: outcomes of the ATBC 2015 Asia-Pacific chapter meeting conservation education symposium. *Applied Environmental Education & Communications*, 16, 1–8.