

Brief Communication:

Protect Great Apes from Disease: Freely Available Education Materials for Research and Tourism

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Great ape tourism is practiced in at least 15 countries across sub-Saharan Africa with tourism sites varying widely in the numbers and types of visitors they receive and their practices to minimise disease transmission to apes.

To reduce disease transmission from tourists to great apes, tourists must understand the risks and comply with regulations, with effective enforcement by tourism guides and authorities. We sought to increase protection from SARS-CoV-2 and other infectious diseases to great apes and people and improve capacity to resume tourism and research safely. The IUCN has clear guidelines on how to mitigate the risks of disease transmission to great apes in tourism and research (Macfie & Williamson 2010; Gilardi *et al.* 2015; Section on Great Apes 2021), but there has been little research on how best to communicate those regulations to tourists to maximise compliance.

Understanding willingness to comply with disease prevention measures

To better understand willingness to comply with disease prevention measures we asked tourists and guides about their past tourism experiences, perceived effectiveness of disease mitigation measures, perceptions of risk and the potential impact of tourism, and how they would feel about different management recommendations. Overall we collected an extensive data set, including (i) 1040 responses from tourists to our online questionnaire

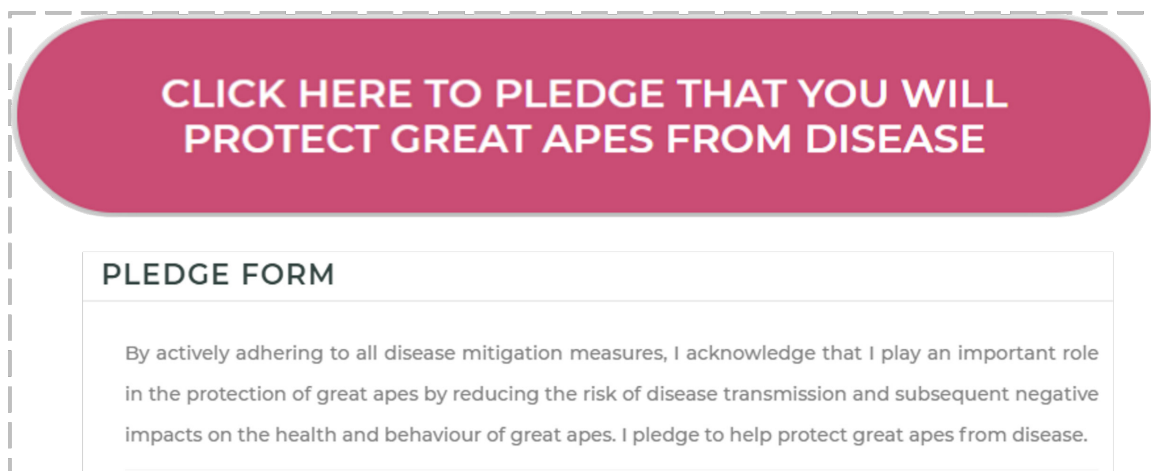


(available in English, French, German, Italian, Mandarin, Portuguese and Spanish); (ii) 25 semi-structured interviews to further understand potential barriers to adoption of SARS-CoV-2 disease mitigation strategies by tourists; and (iii) 45 structured interviews with

tourism guides in East, Central and West Africa to assess pre-training knowledge of disease risk, the disease prevention measures they employ and potential barriers to compliance. To ensure maximum engagement with the 'Protect Great Apes from Disease' material, we collaborated with the IUCN Primate Specialist Group (PSG) Section on Great Apes (SGA), inviting members of the COVID-19 working party to attend meetings and provide feedback on results and materials.

Developing 'Protect Great Apes from Disease' education and training materials

We designed communication strategies to build upon the detailed and targeted understanding of what promotes compliant behaviours among tourists and other groups involved in the sector. For example, questionnaire participants who perceived that there was some level of disease transmission risk had higher levels of potential compliance than those who reported not knowing if there was risk (Nuno *et al.* unpublished data). To address this, for example, we have made sure that the education materials describe both visually and in the text the risk of disease transmission between people and great apes. Respondents also stated that they trusted



**CLICK HERE TO PLEDGE THAT YOU WILL
PROTECT GREAT APES FROM DISEASE**

PLEDGE FORM

By actively adhering to all disease mitigation measures, I acknowledge that I play an important role in the protection of great apes by reducing the risk of disease transmission and subsequent negative impacts on the health and behaviour of great apes. I pledge to help protect great apes from disease.

Figure 1. The pledge on www.protectgreatapesfromdisease.com.

the opinions of scientific experts and local guides, hence we ensured these groups featured heavily in our education strategy. Throughout the education and training materials all decisions about content, style, and material type have been driven by the data we collected.

We developed a bespoke website www.protectgreatapesfromdisease.com to provide information on why great apes are at risk and how tourists at different stages of their tourism experience, including before they travel, can help prevent disease transmission. The website and all of its content is available in English, French, Spanish, and Portuguese. It includes a short video presented by great ape conservation and disease experts that provides basic information on great ape behaviour and distribution in Africa, explains why we need to protect great apes from disease, and how we can do this effectively. The website also provides a dedicated section for research and tourism site managers/researchers to freely download all education and guide training materials in English, French, Spanish, and Portuguese. A simple login is required so the organisations/sites that are using the materials can be identified.

The website also includes:

- A **pledge** that can be taken by tourists (Figure 1).
- **Posters** (multi-lingual visual aids) to convey key disease mitigation information to tourists once they are in-country and at the trekking site (Figure 2).
- **Offline Programmes** for use on tablets/phones at tourism sites with limited internet access. These provide the same information as the website,

but also include country-specific specific videos for Guinea Bissau and Sierra Leone featuring conservation practitioners in those countries.

‘Protect Great Apes from Disease’ guide training materials are:

- A **Booklet** to be used as a portable communication aid throughout trekking (Figure 3). The booklet contains images and written text in English, French, Spanish and Portuguese of all before and during trekking guidelines.
- A **Presentation**, downloadable as a PDF or to use in PowerPoint (or similar) which provides information on the status of great apes, the threat of disease, why tourism poses this threat, why guides are important in the protection of great apes and what the guidelines are so they can protect great apes. The presentation also details how to use the ‘Protect Great Apes from Disease’ materials in communication with tourists including activities designed to empower guides.
- A **Certificate** template is also available for once guides have completed the training.

We have tested the guide training materials at two contrasting great ape tourism sites: 1. Cantanhez National Park, Guinea-Bissau, where chimpanzee tourism numbers are low and guides had received very little former training; and 2. Bwindi Impenetrable National Park, Uganda, where mountain gorilla tourism is well-organised with high tourist numbers. We will continue to fine-tune and adapt training materials from the feedback we receive.

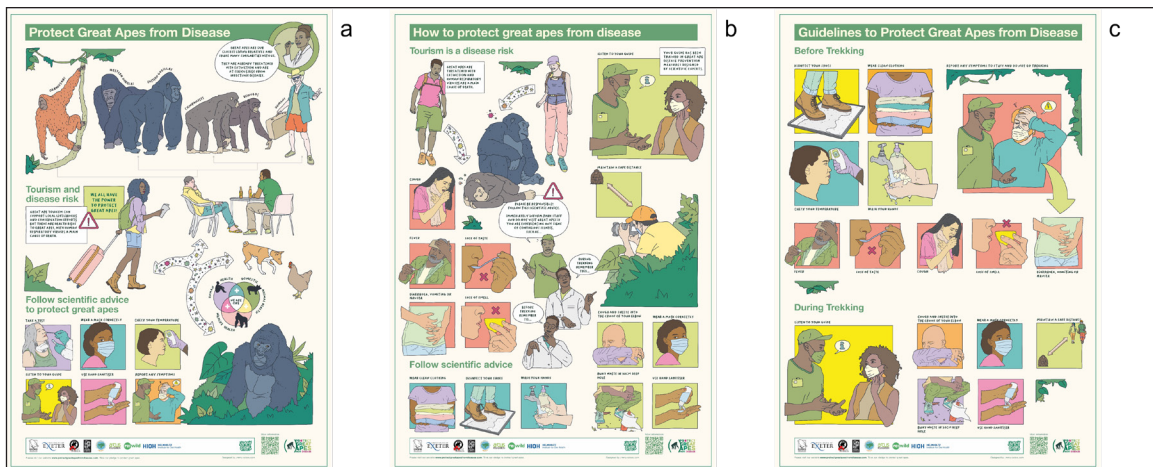


Figure 2. The three posters developed as part of 'Protect Great Apes from Disease'. All three posters are available in English, French, Spanish and Portuguese. (a) Aimed at international tourists before arriving at the great ape site. This poster encourages tourists to visit the website for more information. We recommend this poster be available at arrival areas of airports, hotels, and other tourist locations such as restaurants. Available in 'Pan' (chimpanzee and bonobo) and 'Gorilla' versions. (b) Aimed at international and domestic tourists before trekking. This poster contains all disease mitigation measures and why it is important to protect great apes from disease. We recommend this poster be available at stopping points travelling from cities to the great ape site and accommodation/restaurants near and at the great ape site. (c) A communication aid and final reminder of all before and during trekking disease mitigation guidelines. This poster should be available at great ape sites, and we recommend using it as a visual aid to facilitate communication during pre-trek briefings.

CALL FOR ACTION

As primate tourism resumes globally, we need action NOW.

We ask anyone who has contacts with African great ape tourism sites and tourism organisations to use and share these materials. Please contact protectgreatapes@gmail.com for more information and with any questions. The 'Protect Great Apes from Disease' materials are available now at www.protectgreatapesfromdisease.com.

www.protectgreatapesfromdisease.com. Feel free to register and download the materials, even if you're just curious!

More details about the project development can be seen on our social media pages @GreatProtect on Twitter and @ProtectGreatApes on Instagram, and read in a short communication on ConScience (the conservation science hub at the University of Exeter): <https://www.consciencexeter.org/post/protect-great-apes-from-disease>.



Figure 3. The booklet designed for guide use during trekking. The booklet is available in English, French, Spanish, and Portuguese.

Project Team and Funding

In January 2020 the team (Dr. Kimberley Hockings, Chloe Chesney, Dr Elena Bersacola and Maia Wellbelove (University of Exeter), Dr. Gladys Kalema-Zikusoka (Conservation Through Public Health, Uganda), Dr. Fabian Leendertz (Helmholtz-Institute for One Health, Germany), Dr. Amanda Webber (University of West England), and Dr. Ana Nuno (Universidade NOVA de Lisboa, Portugal) received three months of funding from the Darwin Initiative for this work (CV19RR18). Financial support from Re:wild and ARCUS has ensured the continuation of the project. Thanks go to the IUCN COVID-19 Working Group for their continued advice and support.

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**Invitation to participate in a new project of
the IUCN SSC A.P.E.S. database:**

The A.P.E.S. Wiki

The A.P.E.S. Wiki aims to provide information about ape population status, threats, conservation opportunities and challenges at the site level. This open-access platform will enable information exchange among conservation practitioners, scientists, donors, and other stakeholders involved in ape conservation.

All 34 small and great ape taxa will be included in the A.P.E.S. Wiki. We are currently starting with great ape sites. **If you are familiar with and/or working at a great ape site, we invite you to participate by filling in a wiki template.**

**If you would like to contribute or have any questions, please email
Isabel Ordaz-Németh at apeswiki.info@gmail.com**



**A.P.E.S.
WIKI**