Annex 1.
Stakeholder Methodology
Introduction

Peatlands are highly carbon dense ecosystems, storing approximately one-third of earth's carbon stored in soil, but cover only 3% of the land surface (Joosten et al., 2016). Peat is partially decomposed plant matter that builds up of millennia leading to high carbon storage. The peat forms because the usual decomposition processes are slowed by waterlogging. These typically waterlogged environments provide important ecosystem services that contribute to many livelihoods, while regulating water supplies, providing habitats for biodiversity alongside many cultural and recreational services (Bonn et al., 2016). However, in many parts of the world, from the UK to Indonesia, peatland drainage has led to major emissions of carbon as the peat decomposes, accelerating climate change. This degradation has also led to problems with fires, particularly in Indonesia, with a negative impact on human health.

In the tropics, peatlands are under-investigated. In 2017 a team of Congolese and UK scientists mapped the world's largest tropical peatland complex in the centre of the Congo Basin, known as the 'central depression' or 'cuvette centrale' (Dargie et al., 2017). This finding brought the central Congo Basin peatlands to world attention. The peatlands are largely intact and casual observations by peatland scientists suggest that they are used by local people for fishing, hunting, and collecting forest products, in what appears to be a relatively sustainable way. In the academic 'Poverty and Environment Network'[1] estimate that environment-related income makes up 28% of the total income of households living in or near forests (Angelsen et al., 2014; FAO, 2022). Forests constitute a safety net to mitigate myriad agricultural risks (Pattanayak & Sills, 2001). Yet almost nothing has been published on how local people utilise the peatlands.

The latest estimate of the extent of the central Congo Basin peatlands is 16.8 million hectares with two-thirds of this being in the Democratic Republic of the Congo (DRC) and one-third in the Republic of Congo (RoC). Approximately 5.5 million people live within 10 kilometres of the central Congo Basin peatland complex, 4.6 million in the DRC and 0.9 million in the RoC (CongoPeat Consortium, 2023). Within the RoC, roughly 90,000 people are estimated to live within the Lac Télé Landscape, the core of the peatlands in the northern Republic of Congo, see Figure A1.1. From what we know, based on government and international organisation statistics, almost everyone has low incomes and limited access to healthcare and education.

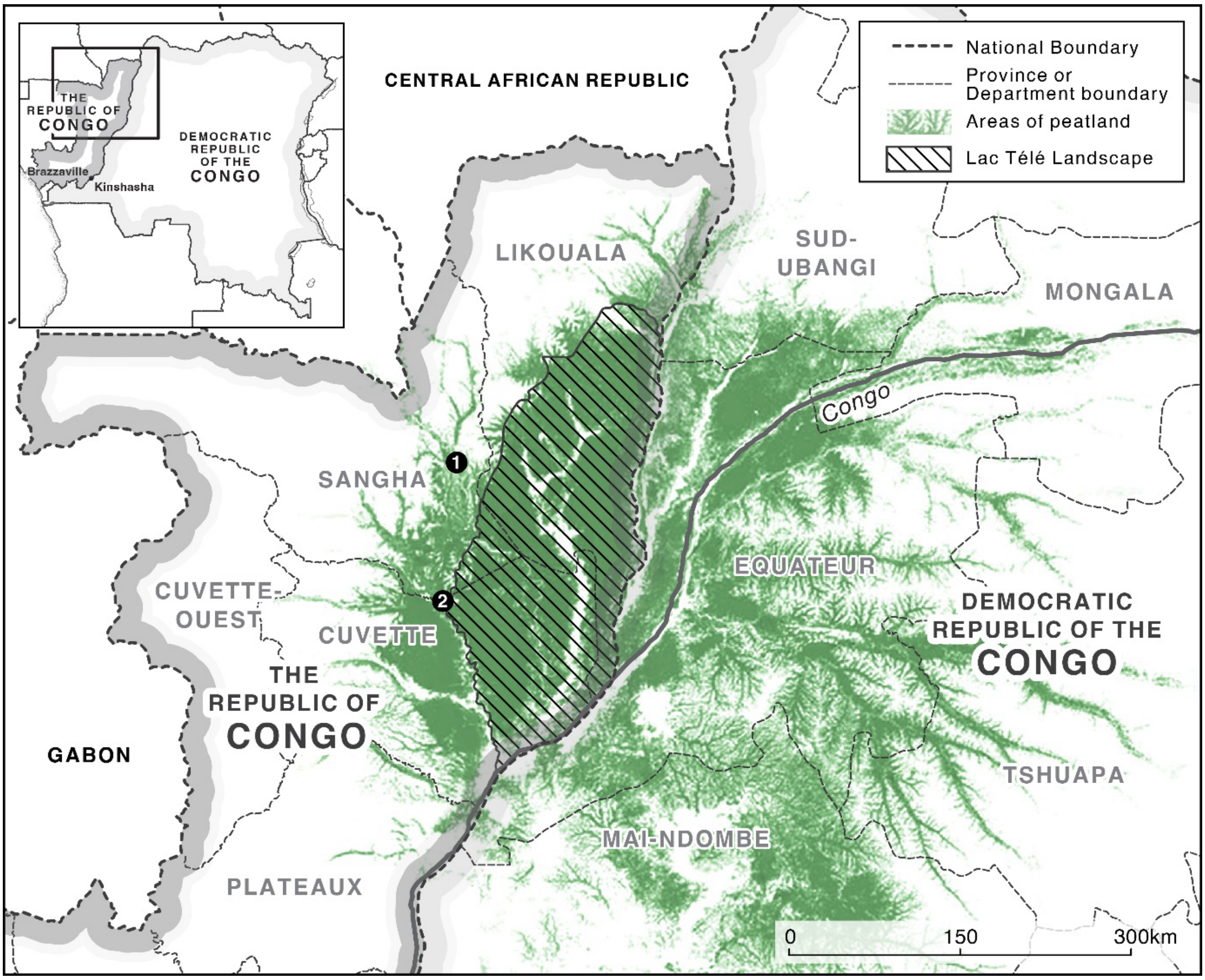

Figure A1.1 Map of the Republic of Congo showing study sites 1 & 2, the peatlands area (Crezee et al., 2022) and the LA Télé landscape covering the administrative districts of Bouanila, Dongou, Epena, Impfondo, Liranga, Loukolela, Mossaka, Ntokout and Pikounda (Global Environment Facility, 2021). Map created by Miles Irving, Department of Geography, UCL.

The peatlands of the central Congo Basin have global, regional and national importance. They provide global regulating services in the regulation of climate, water and disease (MEA, 2005; UNEP, 2022). The central Congo peatlands are a globally important carbon store, with a stock of 29 billion tonnes of carbon across the DRC and the Republic of Congo. They account for almost 30% of the carbon found in peat in tropical peatlands (Crezee et al., 2022). Nearly one third of this, 9.4 billion tonnes, is located in the Republic of Congo - Crezee et al., 2022). This is equivalent to one year's global fossil fuel emissions (Lewis et al., 2022). The carbon stored in the RoC's peatlands is more than double the carbon stored in the trees in the above-ground forest in the RoC (Crezee et al., 2022). This carbon store makes the RoC's peatlands vital for tackling the climate crisis (Barbier & Burgess, 2021; Lewis, 2021).

At a regional level, the peatlands also support water cycles and control sediments (Barbier & Burgess, 2021). The RoC's peatlands are mostly inter-fluvial, i.e. located in large shallow basins between rivers, and they receive most of their water from rainfall (Georgiou et al., 2023). The peatlands also play a role in filtering water and making it locally acceptable for drinking. Damage to the peatlands would affect the local populations and also the millions of people living downstream with an increased threat of flash flooding, such as parts of RoC experienced in early 2024 (UN, 2024).

The central Congo Basin peatlands hosts the highest global densities of Western lowland gorillas (*Gorilla gorilla gorilla*), as well as chimpanzees (*Pan troglodytes*), African forest elephants (*Loxodonta cyclotis*), endemic bonobos (*Pan paniscus*), and Allen's swamp monkeys (*Allenopithecus nigroviridis*) (Sonwa et al., 2022). Lowland gorillas are critically endangered, and waterbucks and lycaons have already disappeared from Congo's forests (IUCN, n. d.). The biodiversity of the peatlands is part of a unique ecosystem (CongoPeat Consortium, 2023).

Despite the central Congo Basin peatlands being relatively intact, potential threats exist. These include concessions for logging, mining, and oil exploration, as well as infrastructure development, such as roads and hydroelectric dams (CongoPeat Consortium, 2023; Dargie et al., 2019). Furthermore, Indigenous People and local communities typically do not have legal tenure to their customary lands, which potentially places them in conflict with industrial concessions if these interfere with traditional livelihoods. Yet, Article 45 of the Law on Sustainable Management of the Environment (2023) prohibits mining, forestry, aquaculture and agropastoral activities, and the development of oil, gas, and hydroelectric activities in the peatlands. Also, in the DRC, President Tshisekedi has suggested that the peatlands region should be a special conservation area (Borowski, 2023). Thus, there are both reasons to be both optimistic and fearful about the ability of governments and local people to continue to manage the peatlands in a sustainable manner.

Given the central Congo peatlands' local, regional and global importance, this report is designed to inform a key question: what are the options for protecting peatlands-dependent livelihoods and protecting the peatlands long-term. We undertook interviews with a wide range of peatlands stakeholders to identify the benefits derived from the peatlands and future expectations, and we conducted primary research with IPLC in the peatlands. The aim is that a better understanding of the benefits derived from the peatlands informs the options under consideration for protecting the peatlands and peatlands-dependent livelihoods.

Objectives

The main objective of this research is to identify likely options for how conservation actions can benefit local communities and improve their livelihoods while locking in peatland protection for the long-term. To meet the objective, our research activities were organised in four steps.

(i) Stakeholders were identified and the economic and non-economic benefits they derive from the peatlands were collated, using existing literature and interviews.

(ii) The future expectations, aspirations and economic benefits of the stakeholders were identified, with a particular focus on Indigenous People and local communities, using online and in-person interviews, and existing literature.

(iii) Future income streams and policies, and other instruments that may potentially meet some of the future expectations were identified, as well as likely synergies or trade-offs and critical gaps.

(iv) Options to optimally meet the desires of the different stakeholders were identified by mapping the expectations and aspirations of the stakeholders, policies, and other instruments, with a focus on Indigenous People and local communities.

This report synthesises the research conducted under this project and presents options and next steps to protect the central Congo peatlands and the livelihoods of the people who depend on them.

Methodology

LITERATURE REVIEW

A literature review was conducted to develop an inventory of institutions involved in the Congo peatlands and to identify the key stakeholders. A literature search was conducted by defining key concepts and search strings in both English and French and listing results from searches in Google Scholar, WorldCat, Scopus and Web of Science, Google, and UCL Library. A list of document titles was drawn up, and two categories of literature were explored: publications in peer-reviewed academic journals, and UN agency reports, government reports, NGO reports, and other grey literature. Nearly five hundred articles and reports were included in our search and form the basis of our research. We analysed 222 publications, including 81 scientific journal articles, 4 books, and 2 theses; 87 reports from UN institutions, NGOs, agencies, and conferences; 19 official documents including laws and decrees; and 29 websites, briefings, bulletins, direct links, and information pages, to identify specific stakeholders.

STAKEHOLDER INTERVIEWS

Stakeholders were identified through the literature review. In addition, when we conducted online interviews of stakeholders, we asked them to identify other stakeholders (snowball sampling). Online and in-person (in London and Brazzaville) interviews took place between January and December 2024. In total, 52 stakeholder interviews were conducted.

Stakeholder interviews were conducted as semi-structured interviews using an interview guide based on the main information needs of our research. This includes organisational profile and interest/activities in the peatlands; benefits derived from the peatlands; expectations and aspirations for the peatlands; opportunities to protect peatlands-dependent livelihoods and environmental services provided by the peatlands. Specific questions on these four lines of enquiry were formulated for each stakeholder, in order to adapt to their institutional knowledge and ask about their areas of expertise. Interviews were recorded if permission was given, notes were coded, and a summary was kept in a table logging stakeholder profiles.

SELECTION OF STUDY SITES

Given the lack of any published evidence on how local people utilise the peatlands in the RoC, we designed and conducted fieldwork to obtain data by working with local communities who live adjacent to the peatlands. The field work was carried out in two sites, Site 1 is a village in Cuvette department, where the community is also near a formal protected area (a national park) and consists of one ethnic group from the local communities, the Ndongoniama. Site 2 is a village in Sangha department with two ethnic groups, the Sangha-Sangha (broadly categorised as a local community) and the Mbendjele (an Indigenous Peoples group), in a community development zone within a forestry concession, see Figure A1.1. The sites differ in ethnic composition, administrative location and their proximity to differing land use agreements. We anonymised the villages in order to maintain protect the IPLC participants from identification.

Research was conducted in the first study site between 18 and 26 April 2024 and in the second study site between 30 April and 6 May 2024. We conducted a total of 25 participatory activities, 13 interviews, five guided forest walks and 93 surveys in the two study sites. Activities and interviews were conducted in French with an interpreter translating from Lingala to French.

Prior informed consent was obtained at the start of every interview or activity. A project information sheet guided a verbal presentation of the research objectives, methods, data protection, risks associated with participating, freedom to opt out, and who to contact in case of a complaint. Time was allowed for questions, and then people were asked if they wished to proceed. If they did, they subsequently signed the consent form, and they were given copies of the project information sheet.

NON-ECONOMIC BENEFITS

We used participatory methods including interviewing techniques such as semi-structured interviews, focus groups and key informant interviews and visualised analyses such as participatory mapping, seasonal calendars and timeline to investigate the benefits people derive from the peatlands (Campbell, 2002; Chambers, 1994). The methods are summarised in Table A1.1. In each study site we sequenced the methods to progress from less sensitive towards more sensitive topics, starting with participatory mapping of the customary land and peatland uses, then doing seasonal and timeline mapping and key informant interviews (KII). Towards the end in each study we conducted focus group discussions (FGD) about protection options, explaining each option as set out in Table A1.2. We gathered information on peatland uses, seasonality and future aspirations through focus groups discussions and guided forest walks. We conducted participant observation of dam fishing in the first study site.

Activities were conducted separately with men, women, male youth and female youth, and with local communities and Indigenous People. In the first site 15 group activities, 8 interviews and 2 guided forest walks were conducted with a total of 214 participants, and in the second site 10 group sessions, 5 interviews and 2 guided forest walks were conducted with 110 participants. In total, there were 254 individuals participating in participatory activities (some people participated in more than one activity).

Table A1.1 Summary of methods and respondents for economic and non-economic benefits and future aspirations research

Method	Cuvette Study Site		Sangha Study Site			
	Local communities		Local Communities		Indigenous People	
	Men	Women	Men	Women	Men	Women
Household survey	39	13	20	2	16	3
Participatory mapping on peatland uses	24	25	7	2	10	11
Seasonal calendar	27	15		7		
Guided forest walk	1				2	
Participant observation	1	2				
KII	11	4	2		1	2
Timeline – past and future	42	19		5		12
Activity/FGD on protection options	10	33	17		12	20
Total	155	111	46	16	41	48

Sampling was purposive, and the invitation to participate in our research into non-economic benefits was disseminated by the representative of local government in each location, either the village or neighbourhood chief or his deputy. Information was, where possible, triangulated between groups, for example men and youth would review a map done by women and vice versa. Participatory activities were structured so there was an introduction, consent, the activity, a review of the output (map, calendar or timeline) and finally a discussion of the output roughly equal in time to the activity itself. In both sites a restitution meeting was held on the final day to share preliminary research findings, listen to feedback and to give the paper maps to the community. Interviews were held with community leaders (village chief, teacher, health worker) and community members.

ECONOMIC BENEFITS ASSESSMENT

We carried out a face-to-face individual survey with 93 heads of household, 52 from the Site 1 and 41 from the Site 2. At each village, sampling was done either using a community map or a list of inhabitants provided by village chief. Socioeconomic characteristics and information on livelihoods assets, including natural, human, social, financial, and physical assets were gathered.

All the sources of livelihoods were considered including peatlands and swamp forest, *terra firme* forests rivers, agriculture, and livestock, and the benefits of each were quantified by asking about harvests quantities, harvest rules and periodicity, and uses. The harvest period for different products varies in season and in duration, for instance, *Gnetum africanum* is harvested every month of the year while *Irvingia gabonensis* is harvested for 3 months in a year, so the per annum value is calculated based on the production period. A few households used to record their production and had a very good knowledge of their daily, weekly, and per annum livelihood statistics. We collected these statistics. For the remaining households, they estimated production based on local production units, and these included 20 and 50 litre cans (for fish), and wheelbarrows (for cassava and wood energy). The calculation for dry fish was made using the equivalent to fresh fish provided by the producers stated by the households, that is a loss of 70% of the mass is water in the drying process. The seasonality of each edible peatland NTFP was used to derive the per annum livelihood production.

FUTURE EXPECTATIONS AND ASPIRATIONS OF KEY STAKEHOLDERS

Research into the future expectations and aspirations of key stakeholders was integrated into the methodology set out above for economic and non-economic benefits. Stakeholder interviews and household surveys included questions about future expectations and aspirations. Specific participatory activities were developed for this research question including a timeline of significant events in the past and expectations for the future, and a sorting of protection options into categories of acceptable, not acceptable and in-between. Preferences for protection options were based on the explanations given in Table A1.2 below.

DATA ANALYSIS AND DATA PROTECTION

Data For the qualitative data on non-economic benefits, expectations and aspirations, notes were taken during interviews and activities, and the activities and interviews were recorded if the participants agreed. Notes were reviewed during data collection and annotated to identify areas for further inquiry (Newing et al., 2011). Data about peatland uses and protection option preferences were organised into tables as they were collected. After leaving the study sites, notes were coded in the margins, using coding categories that are all-inclusive and mutually exclusive, covering the range of responses recorded during the research (Gorden et al., 1998).

Notes were kept securely and were de-identified when typed up. The collection of special and sensitive personal data was minimized and processed according to Article 9 of the GDPR. IPLC were provided with information about data protection prior to being asked if they consented to be interviewed. Analysis was conducted on a secure drive and written reports used only anonymised data. Data is owned by the UCL research team under a Creative Commons licence.

Table A1.2 Protection options explained in participatory activities and surveys

Option	Explanation for Participatory Activities
Protected Area, specifically a national park	National parks are created as a protected area under Congo's Law on Protected Areas (2008). Examples in the RoC are Ntokou Pikounda National Park and Nouabale-Ndoki National Park. Managed by the state sometimes in partnership with a wildlife conservation NGO such as WWF or WCS. Usually zoned so that some areas are prohibited and others are accessible with agreed limits on forest use, e.g. seasons for fishing. A protected area in the peatlands could mean a ban on access to fishing/NTFP/plant resource areas, except in buffer zones.
Community Managed Reserves	As above, created under the Law on Protected Areas (2008), but managed in partnership between the government and an appointed managing NGO and the community.
Community Concession	Created under the Forest Law (2020). Like a forestry concession, where the government signs a contract with a company to manage the forest for a fixed period of time - 30 years - but instead of the company, the government gives the community the management responsibility. No examples currently in the RoC, but these are common in DRC. Secondary legislation for community forests is in development under the Forest Law (2020). Different from a "scie communautaire de développement" or community forest zone designated within a forest management unit of a forestry concession.
Secure Land Title	Congo's law on Acquiring and Occupying Land (2018) allows for individual or communal land title. However, there is very little detail and no known examples of a community gaining land title. Individual title can be gained by a customary land holder who delimits the land and pays for land title. Indigenous Peoples have their right to customary land recognised under the law protecting and promoting the rights of Indigenous Peoples (2011).

No change	The current level of forest access and usage would continue. No legal protections would be added to protect the peatlands from industrial exploitation.
No change + community development	As above, but in addition funding would be provided for community development initiatives. Funding could come from the government or from international commitments to protect the peatland, recognising the role of Indigenous Peoples and local communities as guardians of the peatlands.

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Endnotes

[1] The PEN is an initiative with more than 50 research partners that built a dataset containing detailed socio-economic data collected quarterly. It contains more than 8,000 households at the village level across 40 study sites in 25 developing countries (http://www1.cifor.org/pen).