

IUCN-PAPACO: OVERVIEW OF THE ONLINE (MOOCS) AND ONSITE (UNIVERSITY DIPLOMA AND MASTER'S DEGREE) TRAININGS ON PROTECTED AREAS CONSERVATION



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December 2018

MAIN TECHNICAL AND FINANCIAL PARTNERSHIPS FOR THE PERIOD 2015-2018

Onsite trainings

The Master's degree and University Diploma on protected areas management are developed by the **Senghor University in Alexandria**, (Egypt) with the logistical support from **IUCN-PACO** (IUCN office for West and Central Africa – program on Pas - Ouagadougou).

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The trainings that are considered in this document have benefited from the financial support of the **MAVA foundation**, the **France- IUCN Partnership**, the **Global Environment Fund** (GEF) and the **Luxemburg aid agency** (LuxDev).



Online trainings

The 4 MOOCs online in 2018 and the 2 MOOCs that will be launched in 2019 have been prepared with **EPFL** since 2015 (under the supervision of the **MOOCs for DEV unit**).



Their development and hosting are ensured by the **Center for Digital Education** of EPFL (CEDE).

The MOOCs' content has been developed with the support of many experts including from the **World Commission on Protected Areas** and from various African Universities.



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The Online Certificate and the MOOCs developed in 2018 have been prepared with the support of the **Senghor University**.

These MOOCs have been funded by **EPFL** (with the financial support of private Swiss Foundations), the **France-UICN Partnership**, the **MAVA foundation** and **M. André Hoffman**.



PART 1 – ONSITE COURSES: MASTER’S DEGREE & UNIVERSITY DIPLOMA ON PROTECTED AREAS MANAGEMENT



Part 1:

- 1 Context
- 2 Design of the assessment
- 3 Results
- 4 Discussion
- 5 Conclusion

Master students during their graduation at U-Senghor (June 2017)

1 Context



The Master's degree (Master) in Protected Areas Management (Master PAM) is a two-year long onsite course that was launched in 2009 and is conducted at the Senghor University, Alexandria, in Egypt (U-Senghor is the university of the Francophonie). Each promotion of the Master PAM is made of an average of 15 students, from West or Central Africa.

Master PAM promotion 2017-2019

The University Diploma in Protected Areas Management (UD PAM) was launched in 2011 and is an 8 week long onsite course (held in Ouagadougou, Burkina Faso and Lopé National Park, Gabon), organised with Senghor University and IUCN-PACO (IUCN West and Central Africa Regional Office). On average, 20 students participate in each session.

By the end of 2018 a total of 5 Masters and 14 DUs had already been organised.

The participants are selected based on their academic background (academic prerequisites), their professional experience, their motivation, their line of business (e.g. administration, NGO), their nationality, their gender etc., in order to create representative and diversified promotions, conducive to the mutual enrichment of learners.

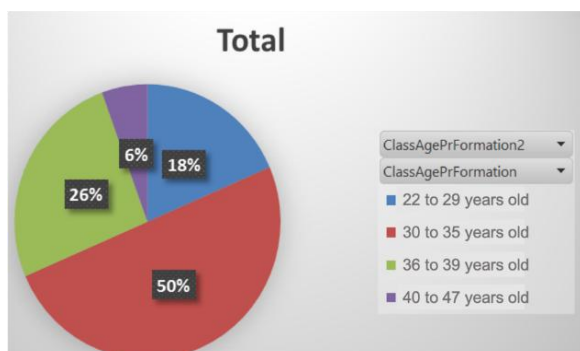
2 Assessing the UD and Master courses

The survey was conducted based on the method described in the handbook “*Mesurer le chemin parcouru de la formation à la prospérité. Etudes de traçabilité pour des programmes de formation et d'apprentissage professionnels*” (Helvetas, 2009). It was carried out between January and June 2018 through a sampling of the five most recent UD promotions (between 2014 and 2018, West Africa only) and the last three Master classes, i.e. a total of 154 students, 108 of which answered the survey exhaustively (70%) and their responses are therefore used here.

3 Results

The sample comprises 108 individuals, 14% of which are women and 86% men mainly from West Africa (in this survey, Central African students only took part in the master's degree). 69% of respondents live in urban and suburban areas and 31% live in or around a PA.

81% of the students were paid employees before starting the UD and the Master, 8% were self-employed, 10% were students. Most of the PAM students were employed by natural resource management administrations or NGOs working in this field.



50% of the respondents were between 30 to 35 years old when they began their training, and 94% of all the students were under 40.

UD training are meant for working professionals and therefore exceptionally include individuals over 40 years old in order to get participants from different countries and/or organizations.

The two main reasons why participants chose to enrol in these courses are their desire to improve their professional skills in PA management (98% of respondents) and the reputation of the training institutions (80%).

In most cases, UD and Master students found the courses through the internet or social networks (40% of the respondents), or via former students (28%) or friends and acquaintances who recommended the courses (25%).

More than 90% of respondents are satisfied with the quality of training. They find that:

- The course content was interesting (98%)
- The progression of the training was adapted (93%)
- The training material (manuals, handouts, illustrations) was appropriate (95%)
- The teaching staff was competent and committed (92%)

However, 20% of Master's students complain about housing conditions in Alexandria, as opposed to 10% for UD students (in Ouagadougou).

65% of the UD respondents and 89% for the Master think that the duration the training is ideal. 35% of UD auditors found the training too short and mention that the training program was too broad compared to the duration allocated to the training (2 months). They add that some topics would benefit from practical exercises (or case studies in the field), in particular GIS and ecological monitoring (*note: two weeks are organised on the ground in a park in Burkina Faso*).

64% of respondents chose this training to learn more about the management of PAs without necessarily having established a professional plan. The others had a particular purpose, meant to promote the evolution of their career, to find new professional opportunities or to launch their own projects.

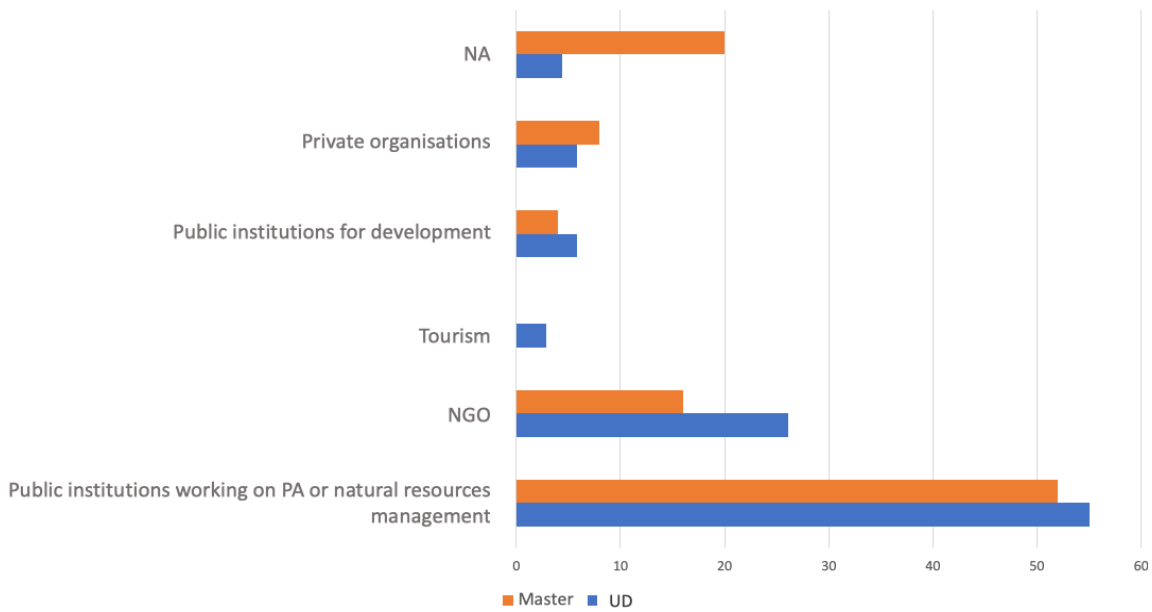
86% of respondents positively answered the question: "In retrospect, would you choose the same training again?" All UD and Master' respondents would recommend these courses and the institutions that organize them, except for one Master student who would not do so because of the limited opportunities in his country (*he is a national of Côte d'Ivoire*).

The vast majority of students had a job before joining the training (80%). They all returned to work or found a job soon after the training ended, and some continued their cursus. Self-employed participants (private sector), however, face difficulties in finding professional opportunities because of their lack of contacts in the PA field. However, about 35% of employees (public or private sectors) complain that they cannot fully use the skills they acquired, or not enough to value them in their career progression.

*"I appreciated the competence of the teachers: some teachers made me love my job as an ecotourism specialist. Ecotourism being an activity specific to protected areas, this training was complementary to my training in sustainable tourism in Japan."
UD13, Ivory Coast*

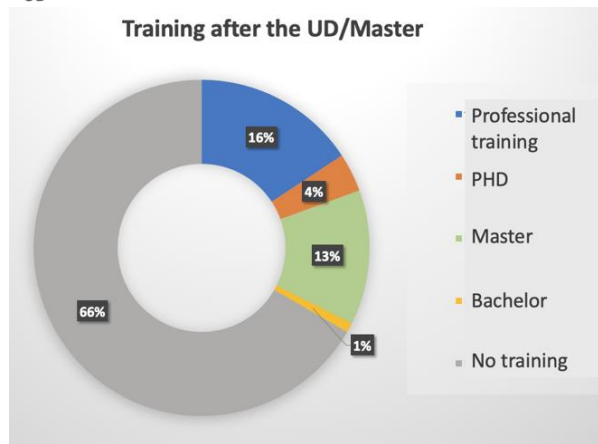
Public sector institutions in natural resources management are the main employers of graduates. The non-profit sector also accounts for a significant share of employment opportunities and this share continues growing over time.

Occupation graduates UD and Master



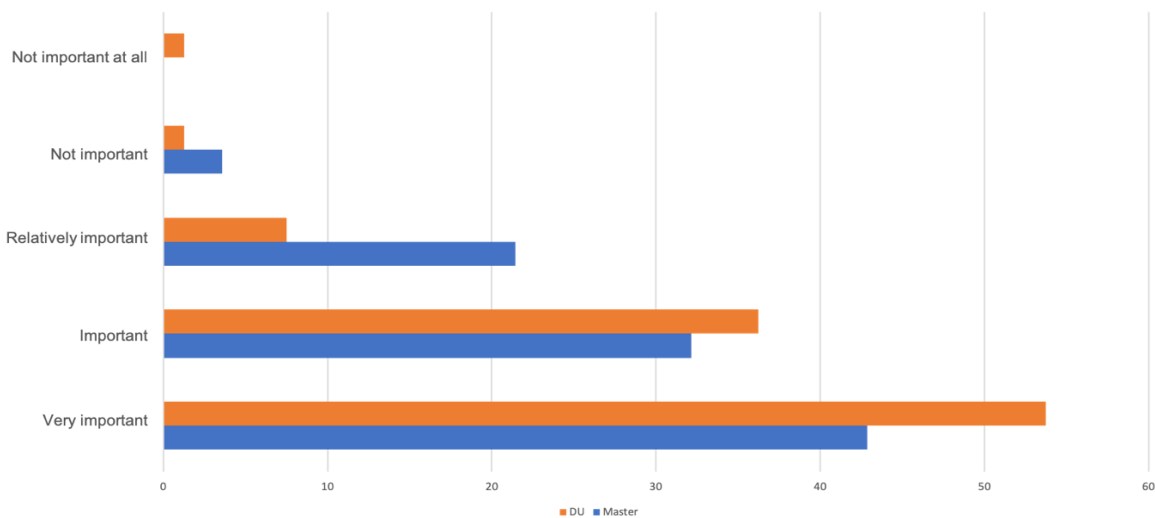
34% of the students of the UD and Master's degree started a continuous education training after graduating. UD students are usually interested in more advanced university training (21% go to university while 13% start a professional training).

On the other hand, and quite logically, Master's students prefer more practical training (25%) rather than other courses within a university (7%).



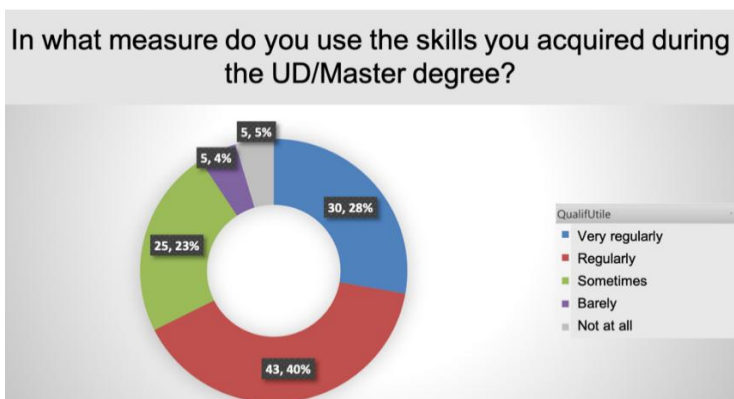
90% of the UD students and 75% of the Master's students believe that the theoretical skills acquired during their training are important for their current work and that they responded to their expectation before joining the courses.

Are the theoretical skills you acquired important for your work?

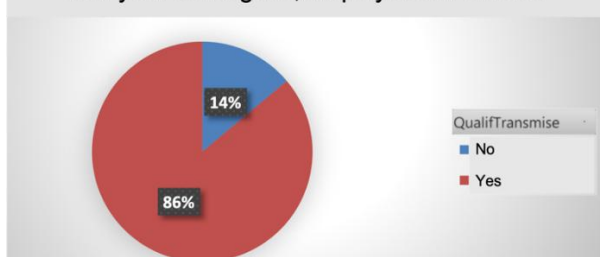


74% of respondents use the acquired practical knowledge in their current work.

The 5% who say they do not use the acquired knowledge at all are working in a sector which is not related to nature conservation.



Did you share the skills and knowledge you acquired with your colleagues, employees or others?



86% of graduates say they have passed on their knowledge to others after they returned from their training.

56% of graduates experienced an income increase after graduation (from a few dozens to several thousand euros per month), 34% kept the same salary and 2% saw a decrease in their income.

Among the two individuals who experienced a slight decrease in their incomes, one is self-employed and the other is an employee who is now studying in university with a scholarship.



Promotion Master PAM 2015

Salaries evolution	Status after graduation from UD and Master						
	Professional or university training	Internship	Self-employed	Salaried employee	Employee in professional training	No work	Total
Increase	5	1	6	30	16	0	56
Decrease	1	0	1	0	0	0	2
Stable	2	4	1	25	2	1	34
N/A	0	0	1	4	3	0	7

4 Interpreting the results

The high response rate of the survey reflects the learners' attachment to the training provided: 70% of the students responded to all the questions. The sample covered the most recent sessions (for the last five years) in order to ensure that the respondents could be reached (e-mail addresses that are still valid) and were able to answer the questions adequately (their memory is expected to still be relatively accurate).

The majority of learners are men (86%), which is representative of a sector still largely dominated by men (particularly in paramilitary PA management systems in French-speaking Africa). Over two thirds of the professionals who responded live in cities, so they are not closely

involved in the field of PA management, but rather in the overall management of PAs or networks, or of activities that do not require to reside in the field (training, awareness projects, project management, sustainable development...).

More than 80% of the UD/ Master' graduates had a job in the environmental sector before the training. This mainly reflects the way in which information was shared about these courses (unlike MOOCs that reach the general public) but also the selection criteria that consider professional experience and therefore often exclude people that do not have jobs or substantial background in this sector.

Many applicants to the UD and Master are older than 35 but two thirds of the selected candidates are under 35 years old. The selection criteria tend to favour young learners (age limit, academic prerequisites...), except in the particular case of certain countries or profiles (6% of UD participants were over 40 years old) in order to ensure the participation of all. Women, whose involvement in the sector is fairly recent, are generally younger.

Regarding the choice of the training: almost all the respondents say that they meant to improve their professional skills in PA management. Furthermore, 80% of the respondents chose the UD or Master because of the reputation of the training and the institutions that organize it. These courses, which have a unique situation in the French-speaking conservation world in Africa, are increasingly known and recognized.

The vast majority of respondents are satisfied with the quality of the courses according to the various criteria studied (content and format: 97%, motivated teachers: 93%, material and logistics: 91%, progression of courses: 93%, etc.). This is a testament to the current maturity of training courses that have successfully built a proven program, a committed team and effective training conditions, even though they have always sought to control costs in order to maintain their sustainability (hence accommodation or equipment sometimes considered very basic by some learners).

89% of respondents think that the duration of the Master is ideal. 35% of UD students, however, believe that the training program is too dense over 2 months and that more time is needed to go deeper into some topics. The question of the duration of the courses has been largely debated since the launch of the UD and the solution probably involves the use of MOOCs to prepare students before the onsite training and therefore to allow more time for practical work.

99% of the UD and Master students would recommend the training and 95% would recommend the teaching institutions; the reputation and reliability of these institutions is therefore valued.

The role of the courses in the employability of learners is more difficult to measure because the vast majority (80%) of UD and Master respondents are people that were employed before their training (in NGOs or public administrations) and this often allows them to get their job back after the training. However, some complain that they cannot fully apply the knowledge gained and do not benefit from career advancement as a result. This is clearly linked to the promotion system within the parks administrations, which is based primarily on seniority.

Most of the UD learners who were not initially employed quickly found a job as a result of the training, but mentioned the need to join a network of practitioners and make contacts, which the training does not fully allow. The question of the relevance of an alumni network arises and an option would be to develop such a network on the model of the MOOC groups that are very active on Facebook.

It is worth noting that around 25% of graduates work in the non-profit sector (NGOs), which reflects the method of selection giving more room to students from outside the public sector (which is nevertheless where the majority of the students come from), but also reflects the emergence of this sector of employment. One third of the learners pursued further training at the end of the UD/Master, including 30% on other topics (administration, management, etc.). This shows a need for diversification in order to improve career evolution and to find jobs in other sectors.

90% of the UD students and 75% of the Master students believe that the theoretical knowledge gained during their training is important in their profession, which shows the adequacy between the syllabus and future needs of the learners. In fact, 86% say they have passed on some of this knowledge on to their colleagues. This "snowball effect", difficult to quantify, is however important to consider in order to measure the overall potential impact of these trainings.

Finally, 70% of the graduates experience an improvement in their living conditions after graduation. Among them, 56% see their income increase after graduation (sometimes very significantly) which shows that this degree can be valued professionally. Without necessarily being able to establish a direct causality, it should be noted that many of the managers of parks or networks in West Africa, some with very high functions in these structures, are alumni of the UD and Master.

5 Conclusion

The present survey did not seek to re-evaluate the relevance of the courses or their adequacy with the needs in this sector, region and language as this has been the subject of several assessments in the past (see www.papaco.org). Instead, the aim was to better understand the impact that the UD and Master's programs have on the professional career of learners (and therefore potentially on the PA themselves).

Feedback from learners shows that these trainings still hold a unique place in the field of PA training in West Africa. They are well known to conservation stakeholders and their partners, and their quality is recognized by learners and their colleagues with which the learners share their knowledge and experience. The overall assessment of the training is very positive despite some logistical difficulties that are mainly related to the need to maintain these trainings at the most "sustainable" cost possible.

It has been observed, during onsite training, that students who have previously followed one or more MOOCs on PA management have better grades than those who came unprepared. The possibility of coupling online and onsite training in order to optimize the time spent on site is therefore an option and is a promising way to reduce training costs or maintain them while improving their implementation conditions.

The translation of knowledge acquired during training into actions to improve the management and governance of protected areas remains difficult to measure, especially considering that some people complain that they cannot use the skills acquired in their current professional environment. And the fact that many learners decide to keep studying after their graduation is a sign that they still feel inadequately prepared or that they do not find suitable employment after their training.

The frustration of not being able to use the acquired skills or simply not finding a job is a key element to consider. The current state of conservation in Francophone Africa, which greatly needs capacity building but lacks the means to finance training initiatives or even jobs poses a serious problem. While it is almost impossible to influence governmental institutions (yet the main provider of current jobs), it can be noted that the non-profit sector (and, to a lesser extent,

the private sector) is increasingly important and could certainly help increase graduates' employment opportunities. Provided that this sector is professionalised and uses local skills and not imported (from outside of Africa) as it often does.

The graduates who have a job really felt the improvement brought by the diploma, both in terms of career progression (some reached important positions requiring this type of diploma) and wages, or general improvement of living conditions. It would therefore be possible to target only this type of audience for training (thus essentially the public sector) until other opportunities are created for "unemployed" students (who may use the MOOCs to improve their chances). However, this presents the risk of not contributing to the emergence of new jobs and decreasing the quality of training, which is currently promoting the exchange of experiences and therefore relies on the diversity of profiles.



Gender is another particular aspect to consider. By voluntarily giving priority to women applying to the training (even if they remain largely a minority), the trainings have increased their potential place in the world of conservation in Africa.

25% of women in the UD 13th promotion

The ultimate decision to be made is therefore whether to "follow the market" (and essentially train paramilitary male public servants) or continue to try to transform this market by promoting other profiles (including women) even if this means that graduates may not immediately find a job in this sector. Building on the hope that the global environmental awareness that is currently taking place, including in Africa (and that the MOOCs are modestly strengthening) will help change the mentalities and therefore the political choices and the sectors of economic activity, it seems legitimate to continue to favour the diversity of learners who may be the precursors of these new sectors.

"I liked the way the modules were delivered. This has been done in such a way that I, who am not directly involved in PA management, have had access to the tools necessary to improve the skills in my field of activity and this also allows me today to be able to raise my parents' awareness of the benefits of PA conservation but also of the risks of breaking the laws that applies to these areas. This training made me want to continue studying."



PART 2 – ONLINE COURSES: MOOCS ON PROTECTED AREA MANAGEMENT



MOOC – PAM PA management



MOOC – EM Ecological monitoring



MOOC - SP Species conservation



MOOC - LE Law enforcement



Part 2

1 The history of MOOCs

2 Design of the assessment

3 Results

4 Towards the certificates

5 Testimonies

Manala, a Congolese student following the MOOC - EM

1 MOOCs on PA management: history and context

Massive open online courses (MOOCs) started to take off in 2012 and there are now more than 7,000 of them, mainly from European and North American universities. They represent a revolutionary opportunity for everyone in the world with Internet access to follow free courses and eventually to receive a statement of accomplishment or academic credits.

"I am a teacher in an agricultural secondary school and teach forestry (...). There is no capacity building mechanism for us teachers and this MOOC is a great opportunity for people like me ... "
Sidoiné, Benin

Creating MOOCs on protected areas seemed particularly relevant; first because there are not enough training opportunities offered on protected areas in Africa compared to the demand.

Secondly, because many of the staff members working in African protected areas are located in remote places from where they could hardly go to a university every day but can follow online courses if they have a proper Internet connection, either through a cell phone or a computer.

It is in this context that the first MOOC on Protected areas management was launched in October 2015 by IUCN-Papaco and EPFL and then three other courses on Ecological monitoring, Law enforcement and Species conservation were developed.

2 Design of the assessment

The data presented in this report comes from three main sources: the MOOC platforms (about 1200 respondents), the questionnaires filled by the students (about 1600) and, more informally, the exchanges between the teaching team and the learners on the MOOC platforms and social networks (more than 5000 registered in the MOOC groups on Facebook).

3 Results

Targets and communication

By definition, a MOOC is open to all and whoever is interested in the topic can register. But through the topics of the courses themselves and through the advertising choices, the MOOC team targets African conservationists in particular.

"I want to thank you for this opportunity to take the "Conservation of Species" course. I learned a lot and it allowed me to start evolving in my work. "
Christelle, Haiti

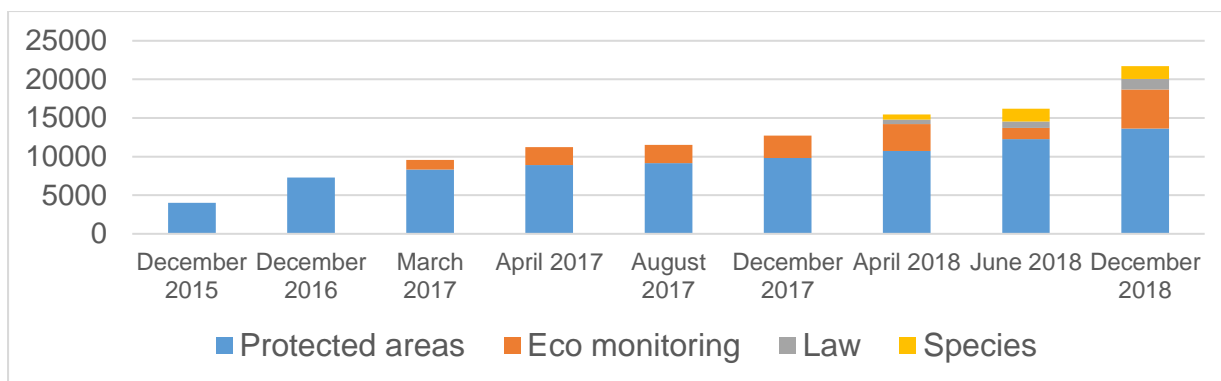
These includes students or young professional but also school/university professors and professionals working on conservation projects. Part of the MOOCs' public also work on other PA-related topics such as tourism, sustainable development and natural resources management.

"I am a teacher in the field of forestry at the agricultural school Medji of Sekou (LAMS) in Benin. My students are in 1st, 2nd and 4th year classes. The MOOC PAM allowed me to strengthen my skills and abilities in protected area management and helped me to identify the key concepts that I need to emphasize to learners for better conservation of natural resources. I am inspired a lot for my teaching. "
Polynice, Benin

The IUCN-Papaco communication strategy has evolved since its first campaign in 2015. Originally based on a list of professional contacts and more "traditional" methods of communication such as NAPA monthly letters, it has gradually diversified through social networks.

Participation and students profiles

The total participation registered since October 2015 is 21,370 registrations. With 13,000 registrations, the MOOC-GAP is by far the most popular of the four courses.



Graph 1: registrations' progression from 2015 to 2018

"I am passionate about nature: landscapes, animals, etc. This MOOC was therefore an opportunity for me to gain new knowledge on PA management; I assure you that I had an exceptional and exciting experience. Moreover, the new knowledge acquired allows me personally to adopt a responsible behaviour towards nature, but especially, to share this knowledge with the communities of my region whenever the opportunity is offered to me."
Alain, DRC

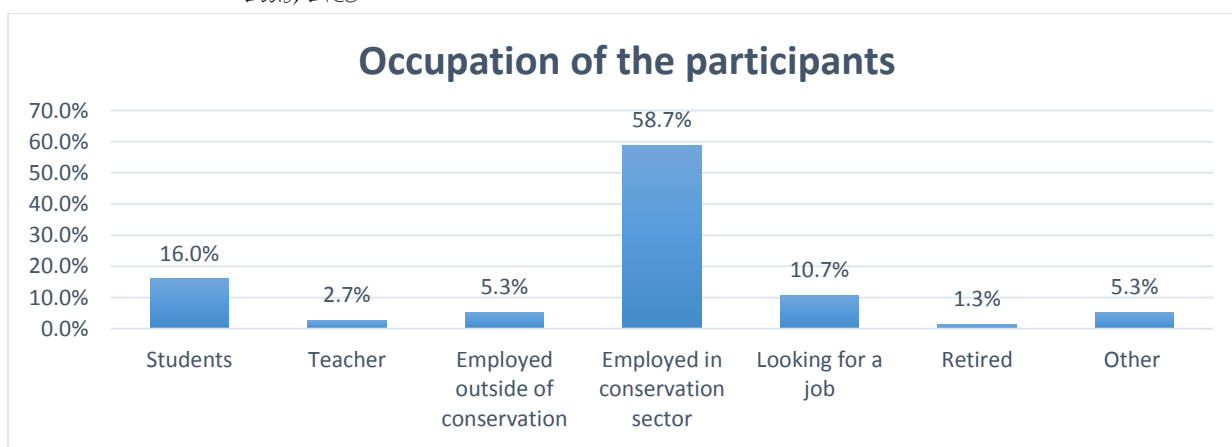
The median age of MOOC participants is 31 years, which is relatively high for MOOCs and may come with difficulties related to learner abilities. And indeed, younger participants are more likely to validate the MOOCs while the people over 40, although constituting a significant part of the participants (13%), rarely validate the MOOCs (only 3%).

	Participants	Students who passed the exams
Median age	31 years old	31 years old
25 - 40 years old	75%	81%
Under 25 years old	12%	16%
More than 40 old	13%	3%

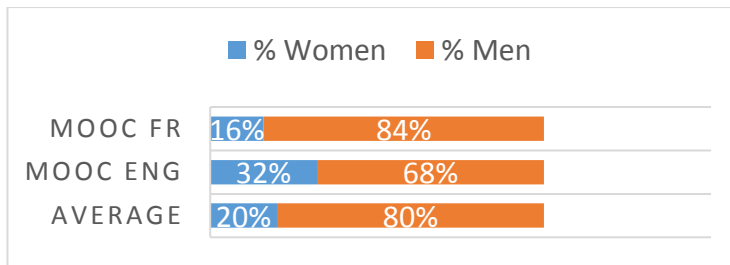
Table 2: comparison of ages between students who registered and those who validated the MOOCs

"I followed with great interest the online course on law enforcement ... During this MOOC, I was able to acquire new and more professional skills in the sustainable conservation of biodiversity ... We thank you for the effort made to carry out these courses, for sharing this valuable knowledge with the world for the conservation of Biodiversity. Thank you very much for this work."
Dido, DRC

Participants of the MOOCs are mainly employed in protected areas (59%), usually in Africa, and seek to increase their knowledge thanks to these courses. Students are also an important audience of the MOOCs (16% of participants), particularly among those who validate courses (22.5%).



Graph 2: main activity of the participants

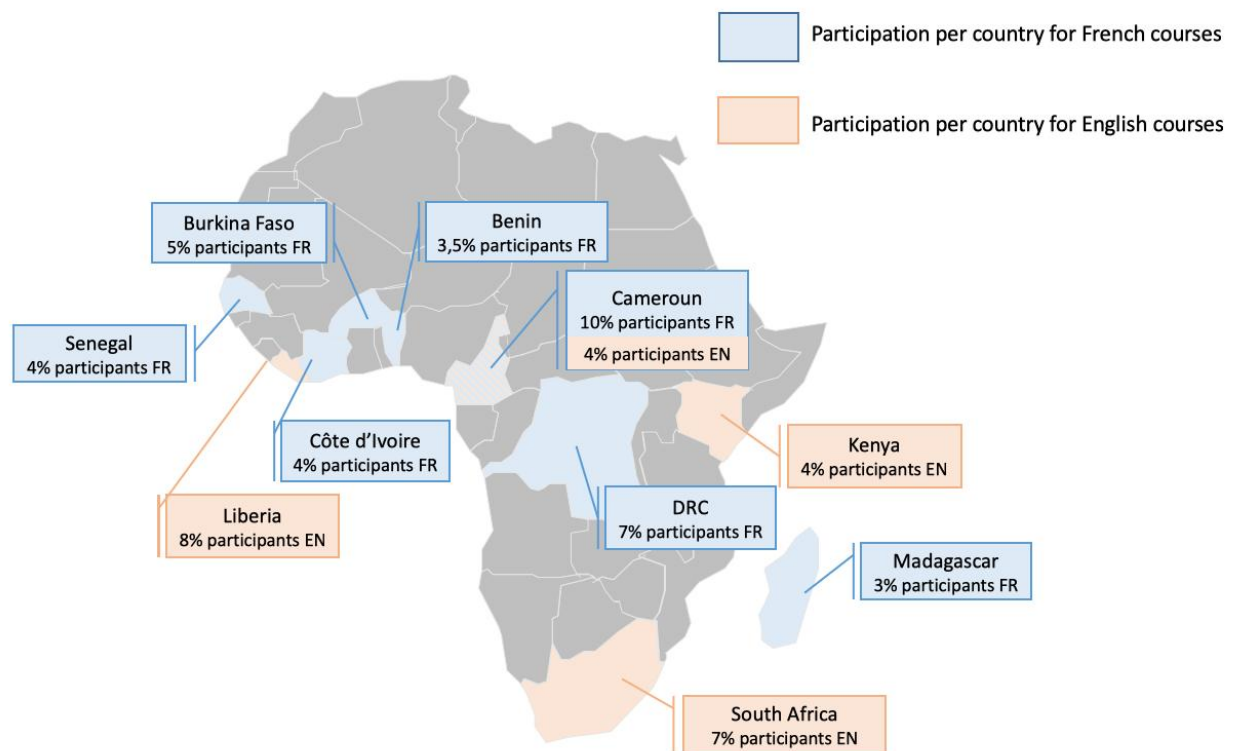


The vast majority of participants are men (80%). This comes with no surprise and should not raise concerns since many PAs within Africa are managed by military or para-military organisations, mostly constituted of men.

Geographical origin

The courses are structured in a very clear way, they are synthetic and say the essential in spite of the complexity of the topics, and manage to give an overview of the numerous issues related to the management of protected areas. So thank you for this huge work, and especially to allow us to benefit from it!
Hélène, France

The MOOCs in French mainly reach African students (80% of the participants), particularly in a few countries: Cameroon, DRC, Burkina Faso and Senegal. As for the English version of the MOOCs, they reach a more international audience with "only" 62% of Africans. A share of the participants is based outside of Africa, including in France (and are sometimes of African origin).



These differences can certainly be explained by Papaco's well-established network in French-speaking Africa and by the larger offer of courses already available in English-speaking Africa (although mostly onsite courses). It should also be noted that these courses are followed in more than 120 different countries.

"Receive my deepest gratitude for the opportunities offered. I also follow the other 3 courses to strengthen my skills for a sustainable management of our natural resources."
Pierre, Burkina Faso

Success rate



With an average success rate of 6.2%, the PA conservation MOOCs are slightly above the average of MOOCs globally. Thanks to the MOOCs, 829 people have received a certificate of completion in PA management, 139 in Ecological monitoring, 95 in Law enforcement and 136 in Species conservation, bringing the total number of certificates of completion issued to 1199.

A dozen students have already validated all the MOOCs and received the 4 certificates of completion, constituting an ideal target audience for the future certificate that will be created in partnership with Senghor University. Some even took the exams in both languages to improve their chances in the job market.

«I am currently studying in China, PhD program at Fujian Agriculture and Forestry University (FAFU). I followed the MOOC PAM which allowed me to better understand the major challenges that Africa faces today for the conservation of its biodiversity. It also allowed me to acquire knowledge on tools and management techniques. Not to forget the essential: it helped me to obtain my scholarship to the PhD that I am currently doing in China! »
Junior, Cameroon

4 Towards the certificate

The success of the MOOC PAM, and the numerous feedbacks from the learners of the first session calling for the implementation of complementary courses, led to the development of the current suite of 4 MOOCs, with EPFL, to which will be added in 2019 a MOOC on the valorisation of PA resources (MOOC-VAL) and a MOOC on the use of new technologies for conservation (MOOC-TECH), both developed with Senghor University.

*"Thank you for giving me this training in PA management. I will make good use of it and am ready to register for other MOOC training as soon as possible. "Julien, Congo
Brazzaville*

With this offer, to which is added a MOOC on Sustainable Development developed by the "Institut de la Francophonie pour le développement durable (IFDD)", the objective is to set up the conditions to create an online certificate (awarded by Senghor University) by 2019, based on the validation of the seven MOOCs and of an onsite exam covering all the subjects of the MOOCs.

5 Satisfaction of learners

"What a great course this MOOC PAM! I intend to continue to follow the other courses. "
Grégoire, Vanuatu

Participants are generally happy with the courses: 97% agree or strongly agree to say that they met their expectations and 92% think they will use what they learnt in their activities related to conservation.

They are also very satisfied with the videos: 96% agree or strongly agree that the videos' content is interesting, 93% that they are clearly understandable, 95% and 88% that the quality of the image and sound is good or excellent.

Finally, and although it is difficult to quantify, MOOC students regularly express their satisfaction and gratitude to the team directly (see testimonials) by email, Facebook or in person.

"Congratulations for once again, this wonderful and effective training that you offer. Bravo!!! "
Bertrand, Martinique

It should be noted that the geographical location of MOOC students (in Africa and, often, in remote protected areas) comes with connectivity issues related to irregular Internet and electricity access. To address this issue, download links for videos in very low definition were made available to students and the exam format was adapted. BOOCs (pdf course support for each MOOC, in both languages) are also available. Finally, online support by the Papaco team is always available to help students in difficulty.

When I learned about PAPACO MOOCs on Protected area management in Africa, law enforcement and Species conservation in protected areas I did not hesitate to let my staff know about them. Our teams have followed the courses to strengthen the capacity of our researchers and collaborators at our research center and our NGO. In addition to the quality of the training, the discipline we observed in groups helped us to become more involved. On a personal level, being a lawyer, these courses have allowed me and continue to enrich my perception of the issues of rights on nature conservation and protected areas which is my field of predilection. Richard, RDC

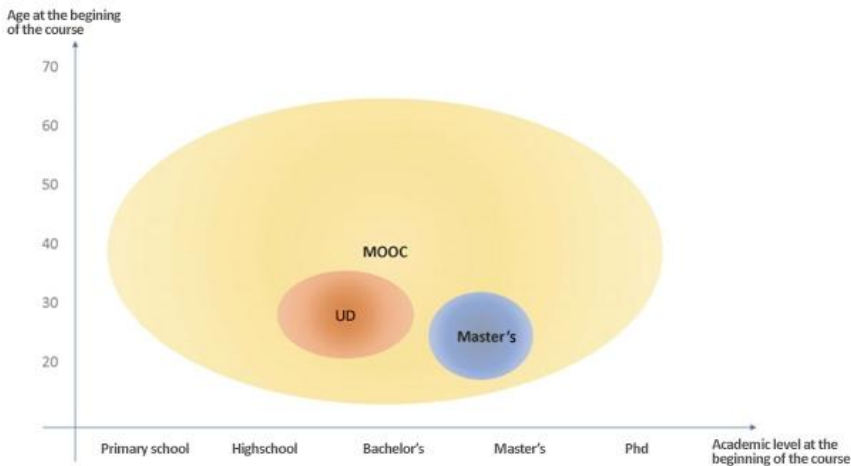
"I had encouraged members of the small team I oversee as a manager in a protected area to partake in the course too. A member of my team who originally comes from an agricultural background, completed the course in French and I have already seen a marked improvement in his understanding in ecological principals and engagement in the department."

Kate, RDC



CHAPTER 3 - PROSPECTIVE FOR 2019 - 2021

The goal is to keep offering trainings both onsite (Master's and University Diploma) and online (MOOCs), thereby enabling students who wish to, to choose to sit exams and receive official recognition of what they learnt (Certificate) or a university degree (Master's or UD).



As a reminder, these courses offer a complete range of capacity building solutions to different stakeholders involved in protected area management and governance, specifically in Africa:

- the Master's degree targets young students (*less than 25 years old*) having already completed a Bachelor's degree, and who wish to specialise in nature conservation in Africa,

- the UD targets young professionals (*25-35 years old*) with a Bachelor's degree as well as a couple of years professional experience, and who wish to acquire new skills that are useful to their profession,

- on a wider scale, MOOCs target people involved in protected area management and governance (managers, rangers, decision-makers, visitors, communities, researchers, students etc.) regardless of their age or level of education. The goal is to provide them with the tools to understand such territories, to know their specificities and give them possibilities for action to promote their protection.

MOOCs are also a useful tool in supporting onsite courses (including those done by other institutions), and can help selecting candidates for the University Diploma and the Master's degree (the MOOCs can be used as a prerequisite for application).

1 Onsite training

These courses are organised by the Senghor University in Alexandria (Egypt - *Francophonie*).

Master's in Protected Area Management: this degree is carried out over 2 years, with a common core in Environment, and a specialisation in Protected Area Management during the second year. The training takes place in Alexandria, at Senghor University. Students having sufficient professional experience can access directly to the second year. The idea is to keep second year class sizes to 20 students. The cost paid by a Master's student is €5,500 per year during the second year but the real cost is estimated €10 000. The Master's degree is worth 60 credits.

University Diploma (UD) in Protected Area Management: it is carried out over 8 weeks of intensive classes in West Africa (Burkina Faso) or in Central Africa (Gabon) according to the means available. The goal is to be able to carry out at least



one UD programme with 20 students per year, or even two if there are enough means available. The actual cost per student is € 3,250. The UD is worth 15 credits.

2 Development of a basket of MOOCs

A series of MOOCs is being developed, offering online certification to students with enough credits (15). The series includes 7 MOOCs, all developed with EPFL and the Senghor University. Each MOOC is equivalent to 2 or 3 credits. Certification is given by the Senghor University if a student passes all the MOOCs and also an onsite exam covering the full course. A statement of achievement can be granted by Papaco upon successful completion of each MOOC.



The total development of the MOOCs and maintenance costs are estimated to €600,000 between 2016 and 2021 (including expenses covering materials preparation, development of the platform, management of different sessions etc. but excluding in kind supports). To keep MOOC registration “costs” to a maximum of € 10 per registration, a minimum of 60,000 registrations are required. Given the number of sessions organised between 2016 and 2021 (3 per year since 2017), 4,100 registrations are needed per session to reach this goal.

The goal is to deliver a statement of completion to a minimum of 6% students registered, in other words a total of 3,600 attestations. If we consider that half the students with a statement will complete the full Certificate (7 MOOCs + an onsite exam), we obtain a result of 1,800 attestations / 7 = 250 Certificates. The Certificate represents 15 credits.



3 Working expectations and tentative costs

The total number of trained individuals is calculated over 2016-2021, to cover the entire period of MOOC existence (note that there was only one MOOC in 2016, two in 2017, four in 2018 and tentatively seven in 2019).

	Master's M2	UD	MOOC: registered	*MOOC: completed	*MOOC: certified
Cost per unit (€)	10,000	3,250	10	167	2,400
Number of credits	60	15	-	2 eq.	15
Cost per credit	184	216		84	160
Total number of graduated individuals 2016-2021	60	120	60,000	3,600	250
To be trained in 2019-21	40	60	38,800		

**In both cases, the full costs of the MOOCs are reported either on the students who receive a statement of accomplishment or on the ones who get certified hence do not include all the students who benefit from the course without passing the exams.*