\*Slide intro

\*clicG - Ecological monitoring has several key functions in a protected area. As we have already seen, it is not just a photo at a given moment, but it is conducted for a specific purpose.

\*clicB - Thanks to ecological monitoring, you get to know the species of fauna and flora populating the PA, their abundance, their significance and the relationships between them. You also get to measure their temporal and geographical distribution and observe potential changes in all these parameters in the short, medium and long haul, as well as the biotic and abiotic factors influencing the species such as the soil condition, fires, climate variations and so on.

\*clicG - Knowing the original state of the environment in itself is a fundamental step to being able to determine the changes induced by management, or by events that escape from manager's control. But this baseline condition is of little relevance if you don’t link it to the optimal condition in which the PA should be.

\*B - Too many conservation projects still set as baseline condition the state in which they found the PA at the beginning. Because of this, the goals set to improve the PA can lead to a state that is actually quite average compared to that in which the site should be if work would have been done correctly and continuously.

\*clicG - It would in fact be wiser to estimate the PA's ideal condition, and then to set a rate of the progress that is intended to be made to achieve this goal. This would make the project's impact more understandable and make analysis of the cost-benefit ratio more consistent.

\*clicB - On the basis of this acute knowledge of the site, monitoring allows you to determine the heritage values of the protected area, those that are targeted by management actions.

\*G - It also helps to identify the pressures and the threats the values are facing, their scope, importance and evolution.

\*clicB - Monitoring gives information regarding the interactions between all the identified factors, be they biotic or abiotic, in space and in time.

\*G - But also on the evolution of these indicators that will allow measuring the protection of the threatened values.

\*clicB - Climate change is a good example of alteration suffered by an environment that can only be detected in the long haul, through strict monitoring that requires special targeting to detect the threat and assess it.

\*clicG - This work on values will enable prioritising actions, both according to what we expect - key values to preserve - and to what is indeed feasible, depending on the means we have.

\*clic - The understanding of the way the PA works is key to avoid seeking to follow indicators that are too complicated when more accessible and cheaper ones exist.

\*clicB - For instance, monitoring populations of hoofed mammals in the forest is usually simply done by measuring the damages caused to trees in benchmarked areas. If the amount of damage increases, more animals are collected, and conversely, if the damages decrease too much, we limit the number of animals being collected in order to let the populations recover.

\*clicG - The management plan includes a part where the ecological monitoring is described. It is crucial to think through this part according to the staff's practical needs - theoretical and in skills - as well as the actual means at hand.

\*B - Let's not forget that the analysis of results provided by monitoring will allow to determine new management actions and thereby new monitoring procedures.

\*clicG - Thus, ecological monitoring truly is a major component of adaptive management.

\*B - As such, management decisions will evolve over time thanks to ecological monitoring and vice versa. This monitoring will specifically determine if the species of special interest, that are the values of the PA, remain within acceptable limits - standards - for their conservation.

\*G - It will help understand if the pressures and the threats are being controlled and redirect management according to the changes that were detected.

\*clicB - It enables to prioritise the means allocated to the conservation according to their effectiveness and to the pressures that arise but also to communicate the successes that have been achieved and to learn from past mistakes.

\*G - As we already mentioned earlier, the management plan defines its goal at different levels, and the collected information during the ecological monitoring will allow to measure the degree to which the program's objectives are met.

\*clicB - Monitoring will then directly measure the manager's ability to execute the plan and achieve the projected results, and to give an unbiased assessment of his work quality.

\*G - Ecological monitoring also shows the necessity to have managers and scientists working together if you want to achieve the best adaptive management possible.

\*clicB - For instance, a recent study carried out on 200 protected areas in 34 countries showed the positive correlation between the good results obtained regarding conservation and the existence of adapted ecological monitoring. The PAs where monitoring is not or just partially implemented show the lowest success rate.

\*clicG - However, ecological monitoring is sometimes perceived as too expensive and offers too little economic return.

\*B - Of course, monitoring an ecosystem is a long term investment because changes occur slowly.

\*G - But too many decisions are made "out of habit" or by people thinking in the short term without even trying to identify if better actions could be carried out for the protected area.

\*clicB - A good example is the early detection of the emergence of invading species that requires strict ecological monitoring.

\*G - The potential risk needs to have been identified, and thereby it is important to know the potentially dangerous species, to have well-trained, to set up a permanent monitoring protocol etc.

\*B - Generally speaking, since we are talking about a potential risk and not a reality, all these things aren't done because they are viewed of little importance by managers.

\*clicG - When a species is eventually detected, it is generally too late for a small intervention to suffice, and costs related to the rehabilitation of the environment exceeds by far that of ecological monitoring that should’ve taken place.

\*clicB - So think twice before putting off a much needed ecological monitoring program because of your budget.