

Adoption Of Smartmobile To Improve The Implementation Of Community Patrol In The Mangroves In Madagascar Using LEM – SMART: Case Of The Kivalo Village

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Submission:

Background

35,000ha of mangroves are effectively managed by local communities, this is one of the main objectives set by World Wild Found for Nature – Madagascar Country Office (WWF MDCO) in the Manambolo - Tsiribihina Landscape in the western part of Madagascar. The empowerment of communities through the natural resource management transfer contract issued by the Ministry of the Environment is one of the success factors for conservation actions in this area. In their management plan, there are several actions carried out by the communities, including patrol activities using the LEM – SMART (Law Enforcement Monitoring – Spatial Monitoring and Reporting Tool) system in the mangroves area. It is a system that collects information from observations or findings in mangroves, analyzes information and outputs a report that will serve as a decision-making tool in the law enforcement and its monitoring. The community's contribution to conducting the patrol activities and sending the data to the data entry is a crucial step in the system. The system consists to: (i) sensitizing local communities on the importance of patrol and surveillance activity; (ii) building their capacity on conducting patrol activities and on the use of information gathering tools (iii) analysis of collected data, (iv) sharing of analysis reports (v) decision-making followed by the law enforcement in case of recorded offenses (vi) and Law Enforcement Monitoring.

Method

Since 2017, patrol agents were using patrol sheet and GPS to conduct patrols. In order to improve the implementation of community patrols, WWF MDCO equipped the community of Kivalo with a smartphone, since November 2020, and has trained the patrol agents in the use of the Smartmobile software adapted to the local context.

Results

The advantages of using smartphones for community patrols and surveillance are multiple.

First of all, technically, the use of smartphone allows to have more reliable data. Indeed, with the patrol sheet and GPS, some data are incomplete and we are not safe from error and / or fraud in filling out the patrol sheet. With the use of smartphones, the data is directly entered into Smartmobile with the minimum margin of error and with proof to support it (photo and precise GPS coordinates). In addition, the use of Smartmobile with Smartphones has allowed a considerable saving of time in the data entry on SMART. Indeed, the data entry in SMART, with the patrol sheets takes a lot of time since it is necessary to enter the data manually one by one, while

with Smartmobile, we can directly import the patrol data into SMART. Remembering that the Smartmobile application used by patrol agents is in local language with pictograms to facilitate the appropriation of the tool.

Secondly, on the practical side, the community patrol agents affirmed that the use of smartphones is more practical than patrol sheet and GPS. Indeed, it is easier for them to use the smartphones during the implementation of patrols, since they do not waste time filling out the patrol sheet, and the smartphones are waterproof, they do not have any constraints for its use when traveling at sea and in the channels, which was very restrictive with the patrol sheet and GPS.

Third, in terms of impact, community patrol agents stated that since the use of smartphones they are more respected and feared by the local population, and that they have seen a decrease in infractions.

Conclusion

With a patrol accomplishment on an average distance of 30km per month by feet and pirogue, the result is satisfactory for the 12 patrol agents of the Kivalo village. It is thanks to the information they provided using the LEM-SMART tool with Smartmobile that the competent authorities of the Region can intervene concerning the infringements in their Mangrove area, and it is clear that the pressures on the mangroves are decreasing. In sum, the adoption of the new tool: Smartmobile and smartphone, has greatly improved the implementation of community patrols within the village of Kivalo.