

Session 02

# The interest of smartphone use for field Fisheries and marine environmental sciences surveys in West Africa; a demonstration project AWAphone

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# **Abstract**

Data collection in fisheries and environmental sciences all over the world remain often difficult and expensive and particularly in low income countries as it is the case in West Africa. The national fisheries center have a regal mission to collect fisheries data and all other information relative to the marine environment. For such purpose all the fisheries center get numerous agents spread all along the coastline in the main national landing sites. The smartphone now get an impressive processing capacity and thus can do numerous tasks which were before limited to computer users, but also allow mobility in the field. The application developed for smartphone can now be easily developed and even delivered in open access. To take advantage of such technological progress well assimilated in West Africa (smartphone are now usual in West Africa) we have make some trials. The main interest of smartphone appear to be the data

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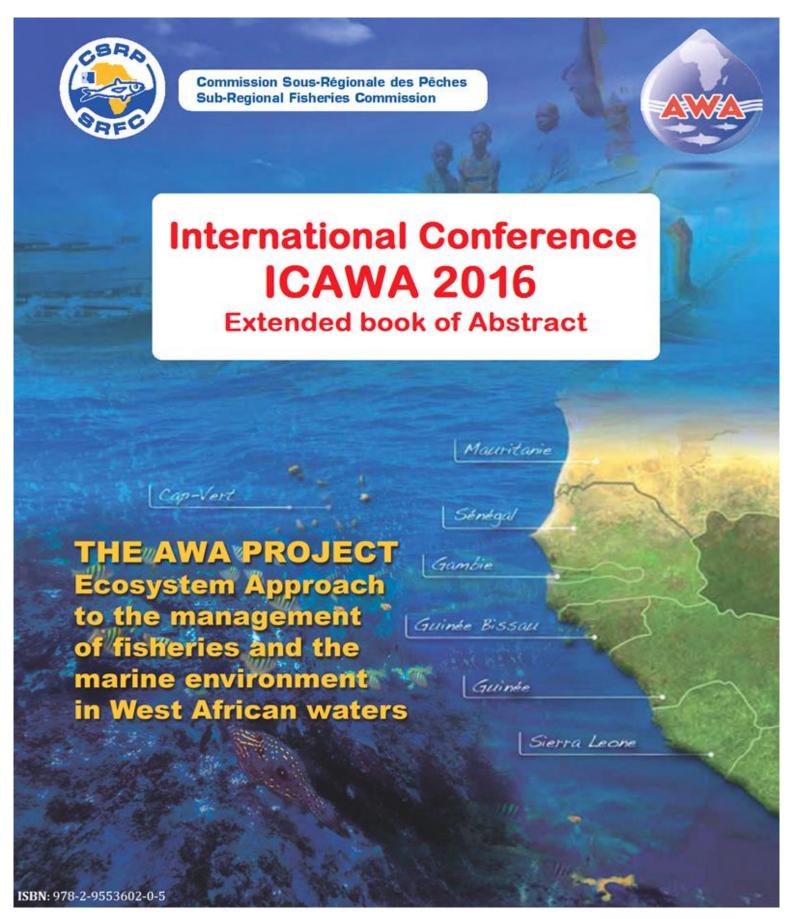
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acquisition, monitoring and transfer (e.g ODK application) in near real time particularly for regular fisheries statistics in main landing sites and field interviews. Such method avoid errors during manual data acquisition and allow fast analysis. A side several of information have been collected during the trials as medusa and algal blooms, and stranding of fish or mammal as whales as well as turtle egg-laying but also extreme event as coastal erosion after a storm (e.g. ravage application; Cerema). These information/reports take advantage of spatial localization using GPS option. Obviously, fish species identification during data collection could be validated with remote expert and e.g. INRH have already developed an application (Guide des poissons du Maroc) for fish identification of main exploited fish species. Moreover, the fisheries center agents can inform on fishing interferences as well as illegal activities. We recommend the equipment of the fisheries agents with the development of regional ad hoc applications and procedures of data collection knowing that numerous others new applications of great interest for fisheries center in West Africa, will be found. Lastly, the smartphone can be associated to physic and chemical sensors to allow to upload and transfer data to the research center data center at low cost, quickly and foster collaborative action with civil society.

**Keywords**: Data collection, landing sites, monitoring near real time, fisheries statistics, field interviews, medusa and algal blooms, stranding, turtle egg-laying, extreme event, illegal activities, collaborative action.







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