DISTRIBUTION, COMPOSITION AND STATE OF THE CORALLIGENOUS FROM TAZA (SW MEDITERRANEAN, EAST ALGERIA). CREATION OF THE FIRST MARINE PROTECTED AREA.

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CONTEXT
The coast of Taza is characterized with a great diversity of marine habitat. However lacking inventory of these valuable and endangered habitats requires data collection. As part of the MedPAN south project for developing and establishing Marine Protected Areas and within the Action Plan for the Conservation of the Coralligenous and other Calcareous Bio-concretions in the Mediterranean Sea (PNUE-PAM, 2008; 2011b), a study was carried out on Coralligenous assemblages of the Taza National Park (TNP) marine part.

The objectives were to:
- Identify the Coralligenous facies types and species.
- Determine the Coralligenous communities distribution and mapping.
- Identify the Coralligenous remarkable species.
- Set up an action plan for monitoring Coralligenous assemblages.
- Approach zoning of the future MPA as a multiple objective problem that considers biodiversity conservation, fisheries sustainability, tourism and other human-uses.

The studied area (Fig.1) was delimited west of Jijel in the marine extension of the TNP considering its mostly rocky and diversified geomorphology. 33 stations covering the whole studied area (92 km²) between Ras Aifa and the Grottes Merveilleuses were investigated at depths ranging between -8 and -56 m.

RESULTS
The coralligenous is well represented in the studied area particularly in the eastern and central parts (islets). These assemblages spread out on wide deep rocky bottoms predominantly on vertical cliffs and outer part of marine caves forming coralligenous rims between 11 and 50m depth. Less but however present, the coralligenous “de plateau” is observed below 40 m. A total of 196 taxa were identified showing the high biological diversity of these assemblages (Ballesteros, 2006).

Exceptional landscapes showed up with many different flourishing facies of the Mediterranean coralligenous assemblages (Fig. 2).

Moreover, the common presence of Astroides calcarea with 100% recovery added to the presence of the rare false black coral Savalia savaglia huge colonies (> 1m) underlines the high state of conservation of this area.

We can consider that the coralligenous from the TNP marine area is healthy toward the following indexes:
- abundance of calcareous algae slats (Lithophyllum spp., Mesophyllum) developing tridimensionly.
- Presence of Cystosira spp.
- Presence of Bryozoans from all size classes without necrosis.
- Abundance of great Bryozoans
- Coralligenous bottoms are clean with very little mud.
- Presence of target species (groupers, rayfish, slipper lobster, red coral, long spine urchin)

CONCLUSION
The seafloors of Taza are covered with well developed Coralligenous assemblages hosting high biological diversity and characterized by absence of major threats (trawling, waste water discharge...). However, to avoid target species overfishing, to protect endangered habitats and conserve the high marine biological diversity, it appeared that creating a Marine Protected Area within the extension of the Taza NP represented the best conservative choice. The future MPA could also be an excellent pilot area for improving management options selected in the framework of the Mediterranean Action Plan (PNUE-PAM, 2008).

In addition to the present one, complementary studies resulted in the proposal of creating a MPA (current) covering 9,903 ha (Fig.3) with the following zoning:
- Integral zone (13% of the MPA) with very high protection, designed for conservation, restocking and scientific research
- Buffer zone (21% of the MPA) with middle protection more specialized around the islets, designed to protect the integral zone and to serve as a platform for environmental education and training
- Surrounding zone (65,5% of the MPA) with a low protection, designed for sustainable management of commercial fishing

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REFERENCES

Figure 1

Figure 2: from left to right, coralligenous « de plateau », Eunicella singularis, E. cavolini, Leptogorgia amentacea, Paramuricea clavata, Axyonium aculea

Figure 3

Limits and zoning of the Future Marine Protected Area of the Taza National Park