Introduction
The STARE-CAPMED (STAition of Reference and reSearch on Change of local and global Anthropogenic Pressures on Mediterranean Ecosystems Drifts) research program aims to 1) improve the understanding of processes by which anthropogenic activities have adverse effects on the functioning of Calvi Bay coastal ecosystems and 2) establish Calvi Bay as a reference area for a long term monitoring to differentiate anthropogenic influences from global influences.

This program has ten work packages, including the monitoring of soft-bottom macrobenthos communities. Surveys are based on 5 potential anthropogenic sources: a wastewater treatment plant emissary, a fish farm, a harbor area, an open boat anchoring area and a river mouth. For each source, 3 areas are sampled: near the source, at a mean distance (±430 m from the source, at a depth of 20 m) and at a long distance (±1400m from the source, at a depth of 40 m).

Material and Methods
Samples were taken before (May) and after (September) the summer (i.e. the period where man-driven impacts are expected to be stronger due to high tourist frequentation). Applied methods followed ISO 16665. Sampling was done by SCUBA diving, using an Ekman grab (0.09 m²). At each station, three samples were taken for macrobenthos analysis, and a fourth one to investigate sedimentologic features. Samples were sieved (1 mm mesh size), sieve residues were fixed with buffered formalin. Specimens were sorted out, counted and identified to the lowest possible taxonomic level, usually the species. The World Register of Marine Species (WoRMS; [1]) was used as reference list. Samples characteristics (Richness Specific (S), Density, Shannon Diversity indices (H′ (log2)), Pielou equitability (J)), Cluster analysis, MDS and Similarity analysis were calculated using Primer 6 software. Most used indices were also calculated (AMBI, M-AMBI, IT, ABC Curve and Clarke Indices) to qualify the animal communities present in the sediment. Main sedimentologic characteristics were determined (Median, Skewness indices, Kurtosis indices, COT and MO values) to help for macrobenthic interpretation.

Results and Discussion
In samples from May 2011, a total of 5853 individuals, belonging to 372 species were identified. Polychaeta were the main taxa (64%). AMBI values were comparable across all samples. No macrobenthic assemblage from any area seemed to be majorly perturbed before summer. However, anterior results collected after summer time near the wastewater treatment plant emissary (1992, 2006) and the fish farm (2007, 2008) highlighted perturbations in soft-bottom meadows ecosystems.

The long-term monitoring of the bay system will allow differentiation of perturbations caused by global modifications (e.g. climate change) and perturbations originating from direct, small-scale anthropogenic influences. We can hypothesize that long-term global changes could indirectly induce modifications macrobenthic assemblages through several processes. First, a potential increase of bad weather events frequency and intensity could change the granulometry and organic matter contents near the river mouth and in shallow areas. Moreover, a modification of planktonic assemblages induces perturbations of food webs, and therefore changes organic matter inputs. Finally, the emergence of invasive species such as Caulerpa racemosa var. cylindracea could cause changes in granulometric conditions [2, 3]. The significant development of this alga in Calvi Bay [4], and its consequences on soft-bottom macrobenthos will be also investigated in the framework of the STARE-CAPMED program.

References
4 - Cariou Nicolas, 2012. La chlorobionte invasive Caulerpa racemosa var. cylindracea en Corse. Mémoire de Master en Océanographie à Finalité approfondie, option Océanographie, Université de Liège, 80 pages