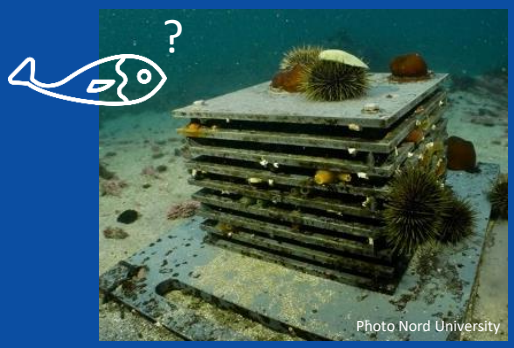
# Autonomous Reef Monitoring System: the methodology

Interreg North Sea Region GEANS
European Regional Development Fund
EUROPEAN UNION

FACT SHEET #5

## *WHAT are ARMS?*

ARMS are highly standardized passive collectors for the assessment of epibenthic and hyperbenthic communities. They are deployed on the seafloor and are allowed to be colonized by fauna and flora. After retrieval, plates can be visually inspected and scraped for traditional or DNA-based identification. The technique is used for long-term ecological assessments and impact studies, and for the detection of **NIS**.




## *WHY are ARMS and metabarcoding a good match?*

Low impact on the habitat

Cost-effective, both in deployment and analysis

Powerful in detecting cryptic and encrusting species

Existing protocols and best practices through geans.eu & https://www.embrc.eu/emo-bon

Want to access ARMS data from the North Sea? Visit https://arms-mbon.github.io/old-arms-mbon-website/ and press "Data overview" to explore photos, measurements, and genetic data.

## *How can ARMS contribute to regional monitoring?*

Samples can be collected in concert on a regional level, and resulting genetic data can be analyzed to assess status and changes in benthic diversity.

- Impact of marine protected areas on diversity
- Range shift of rare and alien species
- Identification of ecological indicator species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