

dystopian future





Marine plastic debris has impacted over **600** marine Species. *Convention on Biological Diversity, 67 (2012)*



A Plastic Bag Was Found at The Deepest Point on Earth (JAMSTEC)



Plastic trash will be found in 99.8% of seabirds in 2050. *Wilcox et al (2015) Proceedings of the National Academy of Sciences - PNAS*

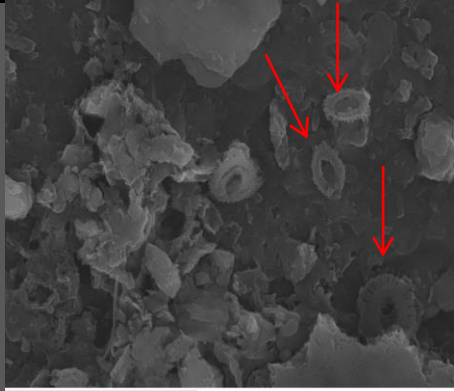


Plastic pollution lying on remote frozen ice floes in the middle of the Arctic Ocean. Photograph: Conor McDonnell



A. Jamieson, 2017

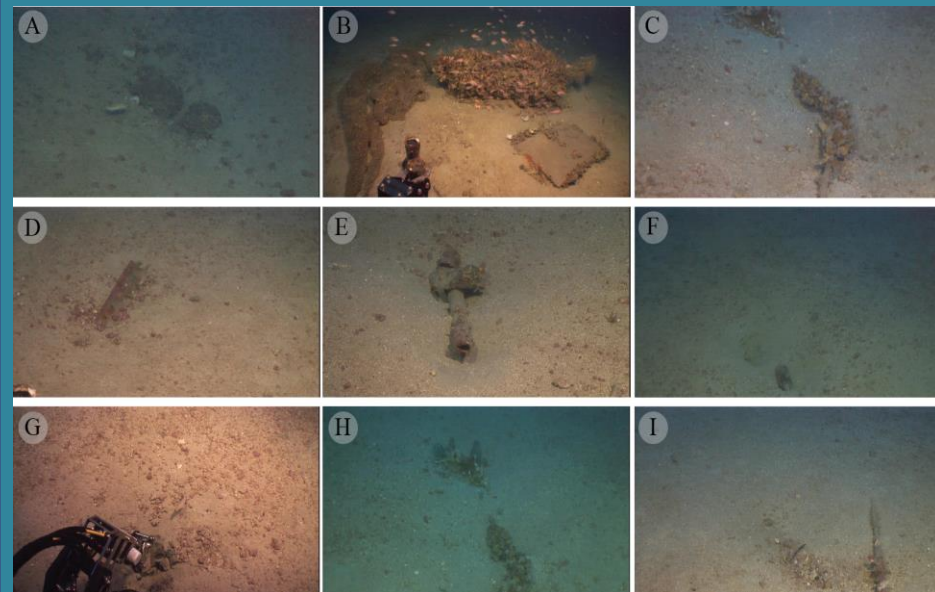
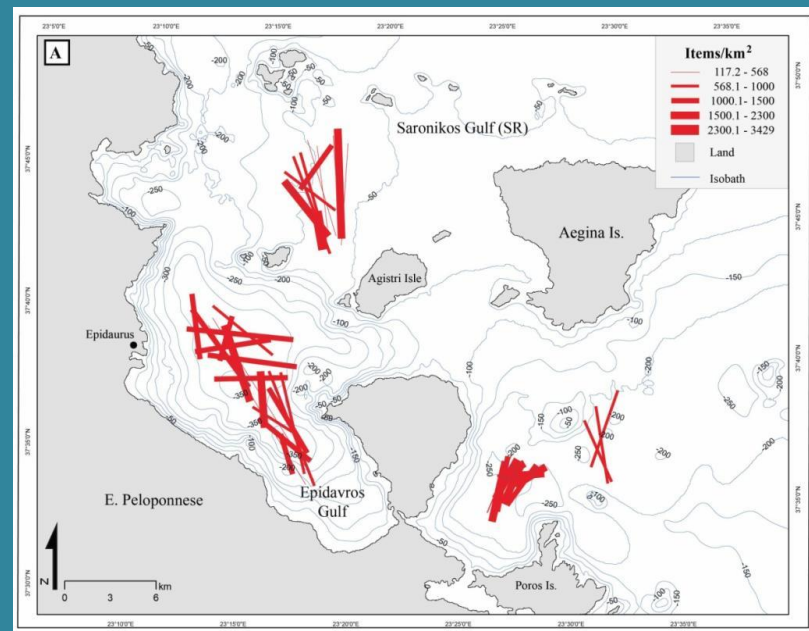
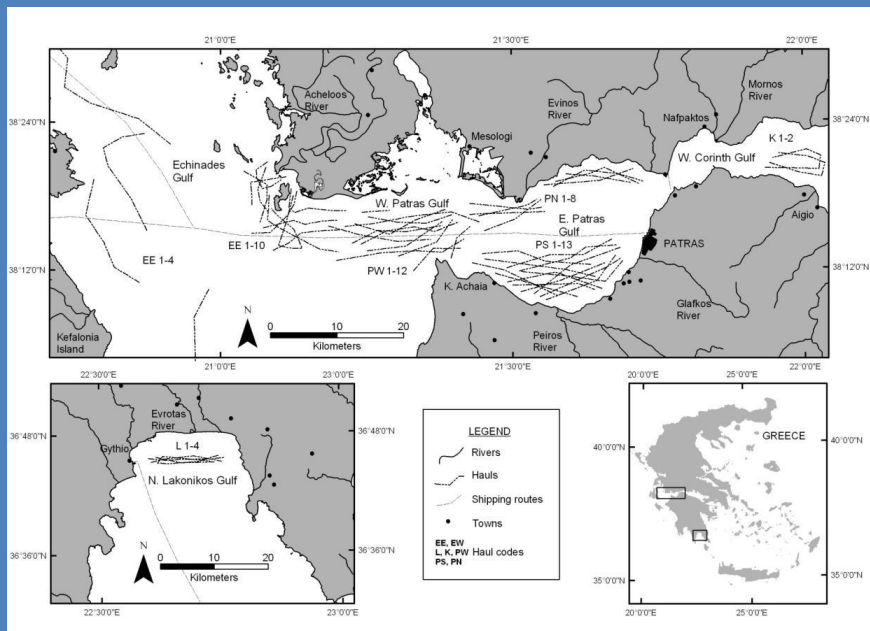
Marine litter can be found throughout the entire marine environment; from coastal areas to mid-oceans and from the sea surface to the seabed.



Colonization and encrustation on plastic debris loakeimidis et al., 2016 Aegean Sea



40 billions \$

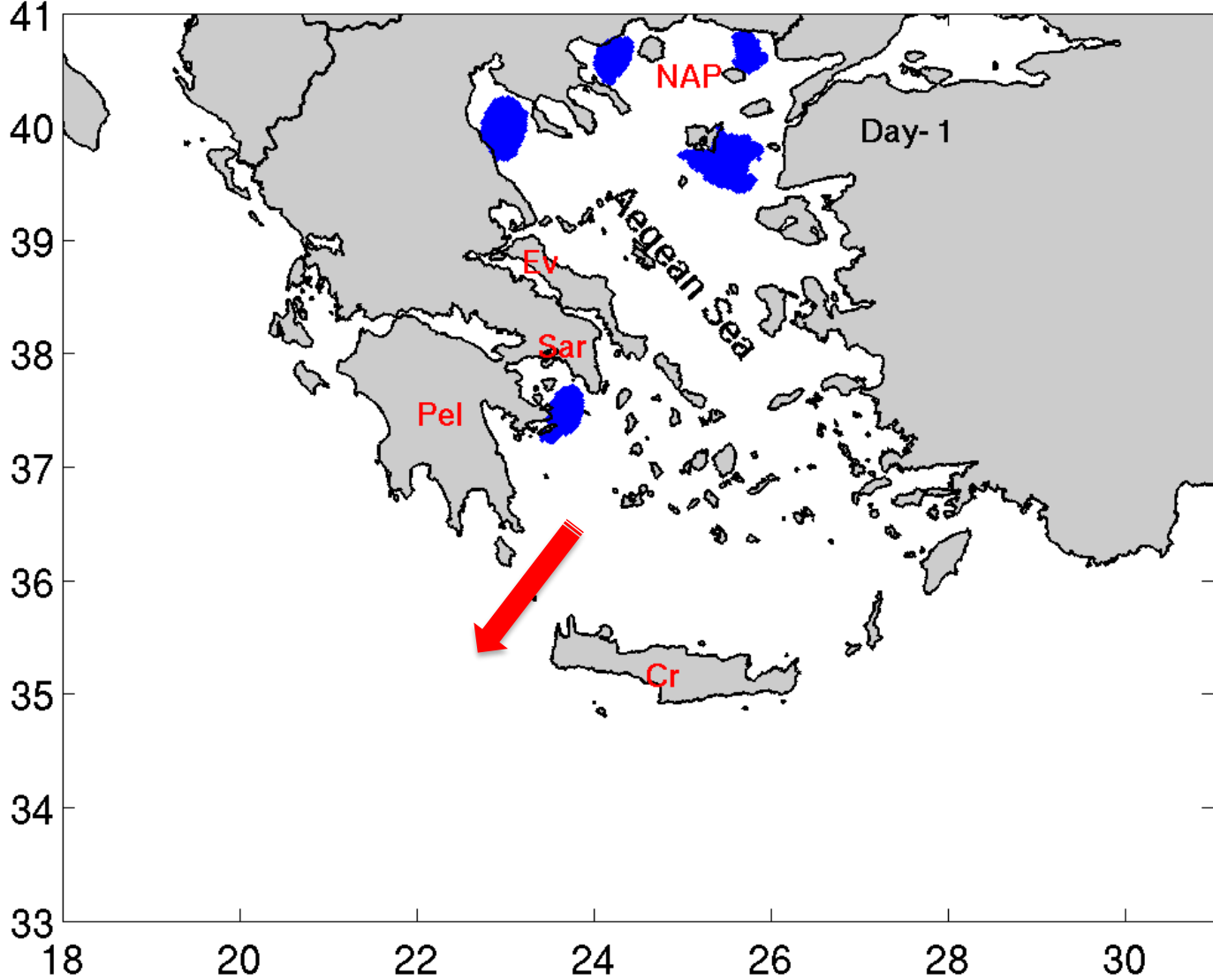



Patras Gulf: 72 – 437 items/km²

Saronic Gulf: 100 – 3400 items/km²

Hydrodynamic POM Model (~3Km), operational within the POSEIDON forecast system

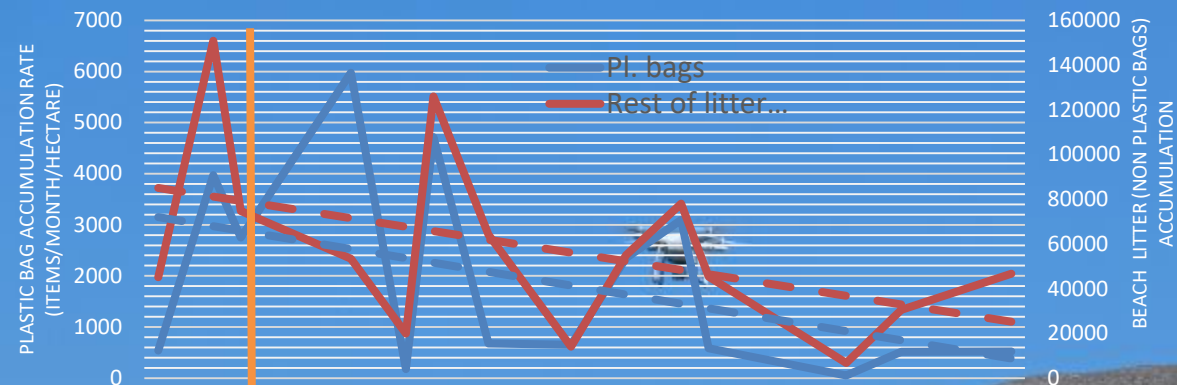
Transport of floating litter particles





Which is the impact
of the
awareness/info
campaigns in the
“real” environment?

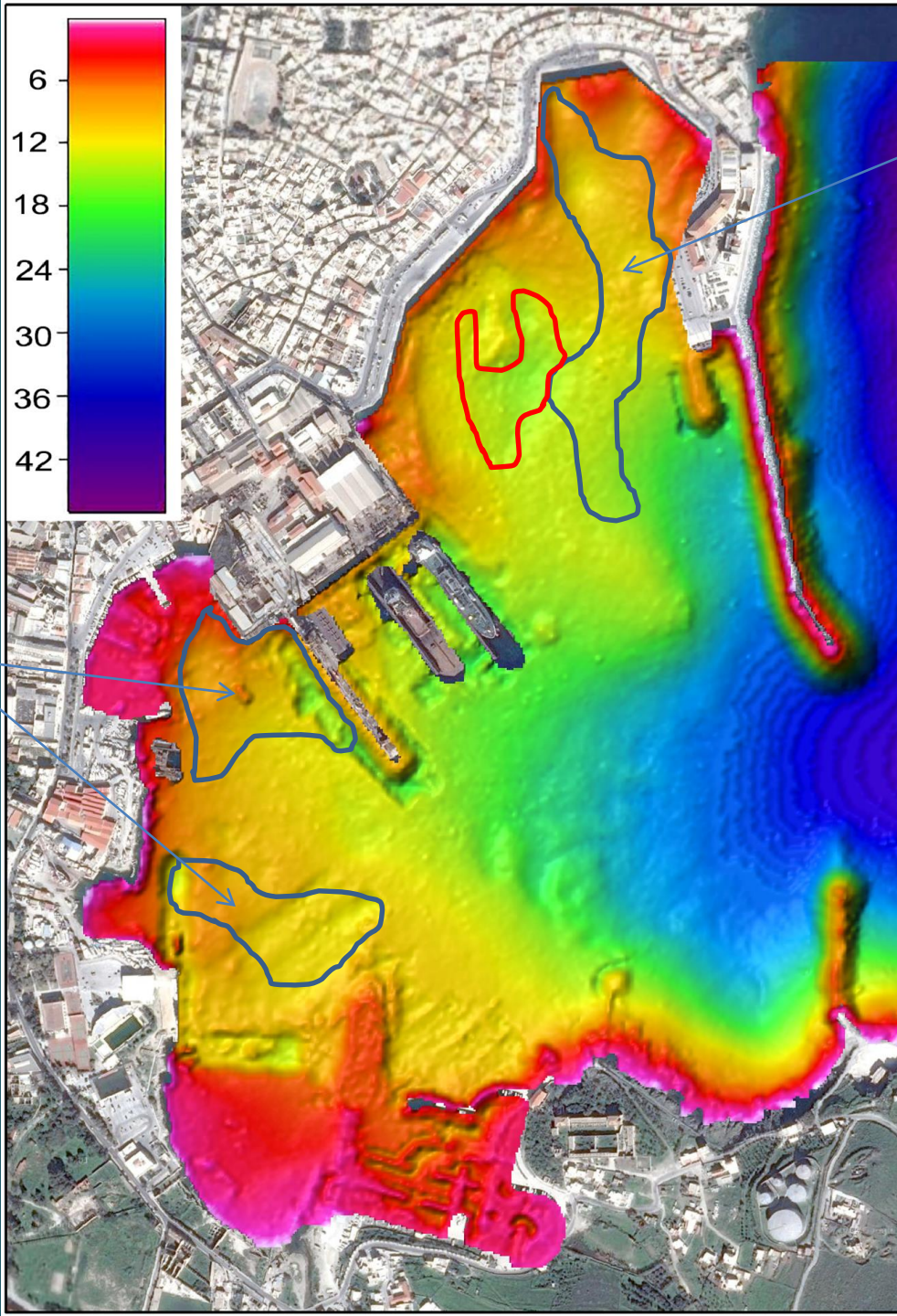
Average accumulation of beach stranded litter



>70%
reduction in
beach litter
accumulation
in 2.5 years



Innovative monitoring actions



Bathymetric depressions

Bathymetric depressions

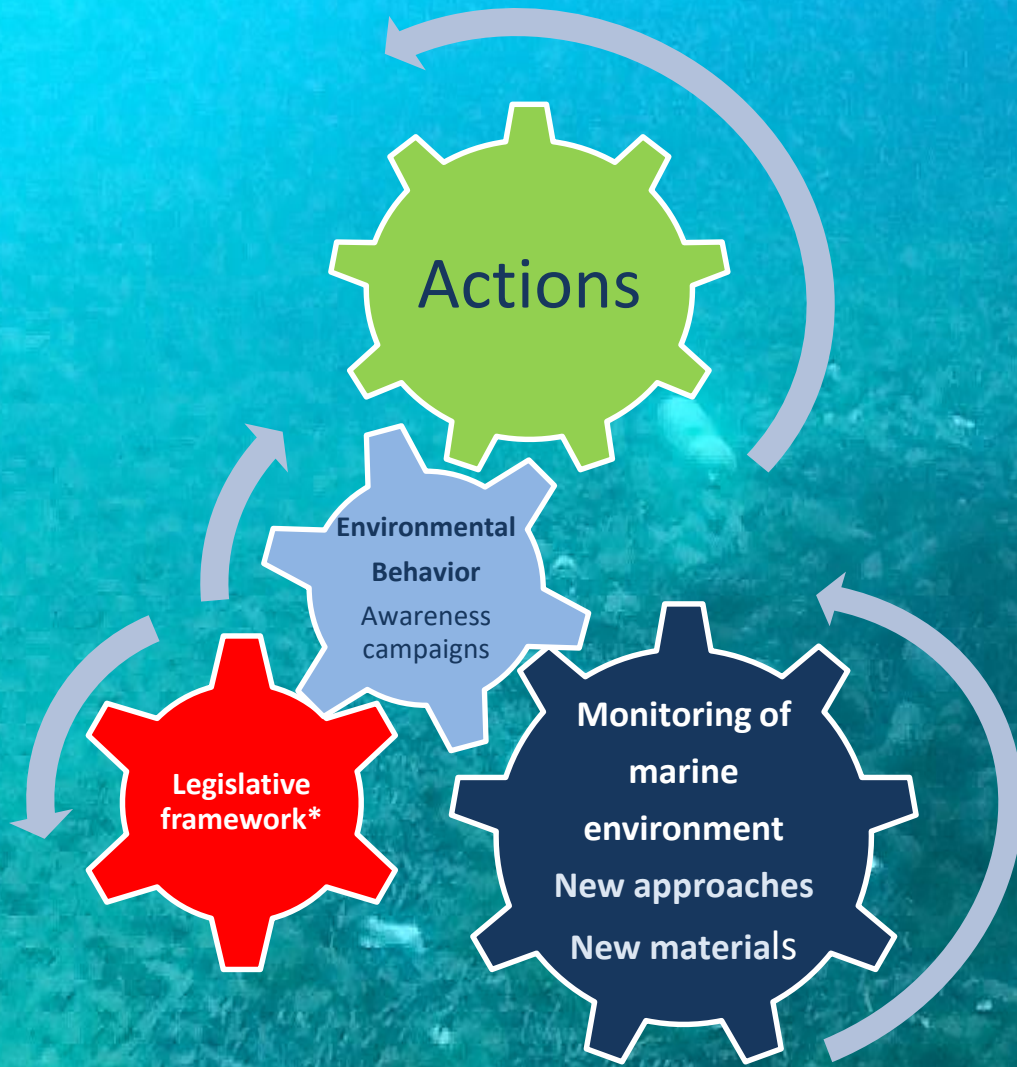
Temporal variations of beach stranded and benthic litter

60% reduction in plastic bags' and 44% in all benthic litter densities on the seafloor

1000 hectares

72 km tracklines

3675 Benthic litter (8.5% plastic bags)



* Single use plastics