

# PACE for the Human Race

## Ideas for White Papers

### 1. Harmful Algal Blooms

for larger areas, target users interested in 1km<sup>2</sup> data (e.g., NOAA, Gulf of Mexico, Great Lakes, Baltic)

### 2. Monitoring of river plumes

→ acidic waters → impacts on shellfish

### 3. UV index, UV exposure at 1km<sup>2</sup> (over land and water)

for human health, coral reefs, marine ecosystems, terrestrial vegetation

### 4. Water Quality & Coral Reefs

(e.g., products: UV, CDOM, K<sub>d</sub>; Great Barrier Reef)

### 5. Seawater density (salinity, temperature) for **management of ballast water discharges by ships**

e.g., CDOM as a proxy for salinity; user: shipping industry)

### 6. **Ship emissions (air-quality)/ship tracking** and impacts on coastal water quality (waste dumping)

### 7. PACE data assimilation for improved **model forecasts** (for fisheries and climate)

## Multi-sensor Data fusion

- PACE + High spatial resolution imagery: for deriving high-spatial/hyperspectral imagery in coastal and open ocean waters, as well as over land.
- PACE+ Geostationary (e.g., TEMPO) for Air Quality