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Live better tomorrow

**CLS HELPS EUROPE ENFORCE EMISSIONS MONITORING FOR MARINE VESSELS VIA THE ESA feasibility study "STEAM"**

### CLS HELPS EUROPE TO ENFORCE MARITIME EMISSIONS MONITORING WITH THE ESA FEASIBILITY STUDY "STEAM"\*

On January 1<sup>st</sup> 2015, the amended European Directive to limit the Sulfur Oxides (SOx) emissions entered into force. Enforcing this Directive requires emissions monitoring for all vessels. Remotely Piloted Aircraft Systems (RPAS) are an excellent tool for measuring ship emissions. The ESA feasibility study "STEAM" has started on November, 1<sup>st</sup> 2015 and is led by CLS.

*\*Ship Sulfur Trails Emissions Aerial Measurements*

CLS, which has been working towards the signature of a strategic R&D partnership with the Delair-Tech company, is currently leading a Feasibility Study project under the European Space Agency supervision. This project, involving CLS and Delair-Tech, along with the European Maritime Safety Agency (EMSA), the Danish Shipowners Association, and the Trident Alliance, aims at proving the technical feasibility of measuring ship emissions using RPAS and lays the groundwork to enhance satellite-based command & control capabilities onboard Delair-Tech drones.

CLS, subsidiary of the French Space Agency (CNES), has worked closely with maritime security administrations for 25 years, providing tracking and monitoring services. Our key achievements include the development and operation of the EU LRIT data center for EMSA and the U.S. LRIT data center for the U.S. Coast Guard. CLS has also worked hand-in-hand with shipping companies to develop hardware and software solutions that suit the needs of the maritime professionals since the 1980s.

<http://maritime-intelligence.cls.fr>

### Key benefits:

- 24/7 operational data centers
- User-friendly web-access
- Secure archiving
- Confidentiality ensured

### Key figures:

<b>Over 1 million</b>	<b>200 000</b>	<b>17</b>	<b>500</b>	<b>4</b>
<i>satellite messages processed daily from 80 different instruments</i>	<i>maritime mobiles tracked worldwide</i>	<i>worldwide offices and subsidiaries</i>	<i>Employees worldwide</i>	<i>24/7 operational data centers</i>

- sustainable management of marine resources
- environmental monitoring
- maritime safety

