

## ENVIRONMENTAL EFFECTS METADATA SURVEY FORM

Name of person updating the form

Jan Sundberg

Date submitted

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Project name: Sotenäs project

Planned

In Operation

Completed

Project description:

*Project Developer:* Fortum AB & Seabased Industry AB

*Technology Developer:* Seabased AB

*Technology type:* Linear generators, point absorbers (buoys)

*Resource (wave, tidal):* wave

*Project scale (test site, prototype, array, commercial):* Commercial

*Installed capacity (MW):* 10 MW

*Project Website:* [www.seabased.com](http://www.seabased.com)

*Launch Date:* 2014 (sea cable launched in 2013)

*End Date (if applicable):*

*Additional Description:*

Location:

Skagerrak, North Sea, Swedish waters outside the municipality of Sotenäs and the town Smögen, ca 120 km N of Gothenburg, at appr. 50 m depth.

*Coordinates (please use Mercator – decimal degrees):* 58.37922°, 11.14907°

Process status:

First phase, 1 MW (34 units) to be completed during autumn of 2014.

Second phase, 9 MW, to be completed 2015-16.

*Permits for operation is 20 years.*

Licensing information (brief description):

A full scale permitting process, including EIA and consultations, started in 2007 and in October 2009 an application was filed to the permitting body, the Environmental Court. Final court negotiations took place in May 2010 and the permit was issued in July 2010. Seabased took care of and was responsible for the whole process. Due to unclear competitive legislation under EU the project awaited clearance from EU for one and a half year before a project go was determined, but which had haltered the project with some 18 months.

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A large number (10+) of additional permits/consents/licenses were also needed in order to enable a project start.

Key Environmental issues: Although the project area was chosen as to minimize competing interests and conflicts the permit from the Environmental Court was conditioned with four “control program” regarding the marine environment: effects on the Norwegian lobster population (also a very important commercial species in the area); fish population and behaviour changes in relation to the wave power park; eventual changes in the seabed conditions and therefore also the benthic community, and finally; under water noise monitoring.

Environmental webpage: [www.seabased.com](http://www.seabased.com) [www.fortum.com](http://www.fortum.com)

### Baseline studies and project effects studies:

General description				
Receptor	Study description including question and/or objective (several can be listed per receptor)	Design and methods (brief description)	Results (brief description)	Status (planned, underway, completed, with dates)
Physical environment	Wave measurements.	Satellite data, during operation Datawell WaveRider Buoy.		Ongoing
Benthos	General baseline information.	Sediment sample collection in wave park area and surrounding control areas.	Baseline information.	Completed
Fish and fisheries	Population effects/trends.	Fisheries statistics.	Baseline information.	Completed
Invertebrates	Norwegian lobster population effects/trends.	Fisheries statistics.	Baseline information.	Completed
Large vertebrates	NA	Statistics.		
Birds	NA	Statistics.		
Marine uses / users	NA	Statistics.		
<b>Reports or Papers</b>	(Key papers on the areas addressed should be listed here; when possible the files themselves can be made available in downloadable PDF format, alternatively links to the files or project website can be provided when available e.g. SeaGen.)			
<b>Research Projects</b>	(past or on-going environmental research projects at the site)			

### Monitoring and adaptive management:

General description				
Receptor	Monitoring program description including	Design and methods	Results (brief description)	Status (planned,

	<b>question and/or objective</b> (several can be listed per receptor)	(brief description)		underway, completed, with dates)
Physical environment	Wave measurements.	Wave Rider Buoy.		ongoing
Benthos	Population effects/trends.	Sediment sample collection in wave park area and surrounding control areas.		Planned
Fish and fisheries	Population effects/trends.	Passive sonar monitoring and complementary test fishing (nets, trawls etc.).		Planned
Invertebrates	Norwegian lobster population effects/trends.	Hauled video camera within standardised national survey program (inside and outside project area).		Ongoing
Under water noise	Eventual disturbance from underwater noise.	Hydrophone recording during different phases of the project (deployment, operation, maintenance etc.).		Ongoing
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