

SCIENTIFIC REPORT	
Reference	Short Term Scientific Mission COST FA1304
Beneficiary	Beata Schmidt National Marine Fisheries Research Institute, Gdynia, Poland email: bschmidt@mir.gdynia.pl
Host Researcher	Michal Tušer, Institute of Hydrobiology, Biology Centre of the Czech Academy of Sciences, v.v.i., České Budějovice, Czech Republic email: michal.tuser@gmail.com
Period	20 - 31 July 2015
STSM Reference Code	COST-STSM -FA1304-27723
STSM Title	DIDSON training course

Summary (300 words, a photograph of you alongside your collaborators and a short quote describing your experience), to be published on the web site of the action)

The ‘Dual-frequency IDentification SONar’ - **DIDSON**, known as an ‘acoustic camera’, is a high-definition imaging sonar that has a great potential in fish monitoring, especially in quantitative and qualitative studies of riverine fish migration. The National Marine Fisheries Research Institute in Gdynia is currently in the process of purchasing of the first DIDSON system in Poland. As there are no specialists in Poland experienced in DIDSON operation and data processing, the intensive training under the supervision of skilled foreign experts was advisable. The scientists from the Institute of Hydrobiology, Biology Centre of the Czech Academy of Sciences (IHB BC CAS), with their experiences and skills in operating DIDSON, belong to the best European experts.

The purpose of the STSM ‘DIDSON training course’ was to become familiar with DIDSON operation and data processing with the particular attention focused on:

- pre-processing (data conversion, foreground and background filtering), target tracking (manual and automatic) and target classification,
- counting the number of upstream migrating fish with respect to daytime and the whole migration period,
- determining the detailed characteristics of fish (length, swimming speed, etc.).

The data used as the training set were gathered in the River Vltava (Czech Republic) during mixed-species fish migration in spring 2015. The DIDSON data were processed with the Sonar5-Pro post-processing software (Lindem Data Acquisition, Oslo, Norway). All analyses were carried out under supervision of Dr. Michal Tušer. Moreover, one day during the STSM was dedicated to DIDSON deployment and measurement directly in the field on the Římov reservoir.

Acquired knowledge is the foundation for conducting DIDSON-based research in Poland. Also establishing close contacts with the neighbours creates the possibility of further fruitful scientific collaboration.

Furthermore, relatively short distance between both institutions possessing such high-quality imaging sonars creates the possibility for joint research using both devices concurrently.

