

# Australian Marine Mammal Centre

## Final Report

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### Season 2014/15

- **Title - ARWPIC Data Migration**
- **Chief Investigator – Dr Rebecca Pirzl**
- **Organisation – Skadia Pty Ltd**

### Activity Period – July 2014 through April 2015

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#### 1. Activity Summary

The ARWPIC Data Migration project added profiles of some 2000 whales, 4000 sightings and 10,000 supporting images to the Australasian Right Whale Photo-Identification Catalogue. In doing so, this work launched an online integration platform for Australasian southern right whale photo-identification datasets.

Through the migration of existing long-term data, spanning four decades, the project has established the first platform in the southern hemisphere for researchers to conveniently share such data, and has set the scene for other data to be added over time.

Photo-identification data contributes to management and conservation by enabling analyses of habitat use, movement and migration patterns, population parameters, threat exposure risk, health indices and population estimates.

The project was a run in collaboration with southern right whale researchers, and long-term data from southwestern Australia (the SW dataset) and Tasmania were added to ARWPIC during the project.

During matching three individuals were definitively matched for the first time between SW and Tasmanian datasets.

#### 2. The Outcomes/Objectives

The project achieved its stated objective of migrating existing SW and Tasmanian long-term datasets into ARWPIC in full.

#### 3. Appropriateness

The approach taken was a combination of automated and manual data migration from existing databases into ARWPIC. Each long-term dataset held essentially the same data fields but in very different existing databases. Automated data migration into ARWPIC achieved through programming took place in tandem with manual data checking and validation.

The following steps were used:

**Data preparation** – data accessed, inspected and organised in preparation for migration

**Programming event/sightings/individuals data migration** – automated data transfer from existing datasets was used where possible

**Assigning images** – images were uploaded and assigned to Event, Sighting and Individual. Image data on quality, body part and perspective was entered manually.

**ID coding and/or matching** – The internally reconciled SW dataset was coded and entered first. A computer assisted matching process was then used to cross match with the Tasmanian dataset as it was entered.

**Validating data** – the data was then validated in a curation step prior to entering the ARWPIC catalogue proper.

This was an appropriate and ultimately successful approach given the difficulties in automating transfer from existing datasets that had been built up over decades and required manual checking for consistency. The approach optimised the efficiency of data transfer and ensured data integrity.

#### 4. Effectiveness



The approach taken was a combination of automated and manual data migration from existing databases into ARWPIC. The project was successful and achieved its stated objective in full. The ARWPIC catalogue is now fully functional and primed with Australia's most complete long-term dataset from southwestern Australia and data from key historical southern right whale habitat in Tasmania in southeastern Australia.

ARWPIC is ready for further data contributions both through migration of additional legacy datasets, and as data is acquired in real-time. The system is providing, for the first time, real-time matching capabilities accessible to the research community, conservation managers and the general public. This novel data management, integration and exposure capability is expected to significantly increase the usefulness of southern right whale photo-identification data, open new options to researchers for more powerful and integrated analyses, and contribute to realising the full benefit of prior investment of public funds in right whale photo-identification. ARWPIC is also expected to be a valuable tool for conservation managers, and facilitates education and outreach in relation to southern right whales.

In retrospect the project team cannot think of a more effective overall approach. The project essentially required a large amount of manual input to check, validate and enter pre-existing data stored in different systems. Through ARWPIC, the capability is now available for researchers to process and manage data online within the system. If uptake, including embedding the use of ARWPIC in photo-identification workflows, is appropriately supported, the creation of legacy datasets and the need for future data migration can be removed.

The SRW research community was kept informed of project progress throughout via email updates and a dedicated blog. Feedback during the project was that there was an appropriate degree of inclusiveness and members of the community were across the project and comfortable with its progress. Into the future the proponents would encourage the AMMC to support the southern right whale community's uptake and use of ARWPIC

through some dedicated curation resources. The next phase of work involves embedding the system in standard work practices, and user support and curation activities will be needed to ensure ARWPIC remains current and gains full traction.

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