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## 13 SEPTEMBER 2011: 2 NEW KEY PIECES OF INFORMATION LEARNT ABOUT THE GNARALOO LOGGERHEADS

That:

- 1) The Gnaraloo Loggerhead turtles are part of the 3rd largest Loggerhead turtle population **in the world &**
- 2) The Gnaraloo Bay Rookery is **1 of the 2 top mainland areas in Western Australia** with the highest nesting densities for Loggerheads.

For more information, read the official media release below:

A new study conducted using state-of-the-art mapping technology has uncovered Gnaraloo Bay, in Western Australia's remote north-west, as part of the third largest Loggerhead turtle population in the world.

Run between November 2010 and February 2011, the Gnaraloo Turtle Conservation Program (GTCP), which was underpinned with world-leading Esri Geographic Information System (GIS) technology, found 426 sea turtle nests along the seven kilometre-long rookery – after 522 were reported in 2009/10 and 368 in 2008/09.

Turtle researchers consider sites with more than 300 nests per season as 'significant'.

Esri Australia Managing Director Brett Bundock said GIS technology has rapidly emerged as a valuable weapon for 21st century conservationists.

"GIS presents large volumes of data in an easy-to-interpret visual format, providing an accurate and comprehensive view of a situation – which is enormously important when conducting scientific research," Mr Bundock said.

"The GTCP's results establish irrefutable, independently verified proof that the Gnaraloo Bay rookery makes a substantial contribution to the world's Loggerhead turtle population.

"By mapping turtles, their habitats and their predators, our GIS technology has delivered compelling insights into the threats facing sea turtle rookeries and a clearer understanding of the action required to prevent -decline."

GTCP Project Manager Karen Hattingh said the findings would help secure valuable support for the species' plight.

"Loggerhead turtle populations are declining rapidly worldwide, so studying and understanding the location of their primary nesting sites is of utmost importance," Ms Hattingh said.

"We hope these findings bring action from government and community decision-makers and draw public sentiment towards the need to protect this ancient species."

The Loggerhead is one of the world's most endangered species of sea turtle – its main threats being introduced predators and habitat degradation – and only one in 10,000 hatchlings survive to sexual maturity.



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During the 2010/11 season's monitoring period of 87 days, 799 turtle nesting attempts by all three species were recorded at Gnaraloo Bay, with 373 of these being unsuccessful – meaning the animals returned to sea without depositing eggs.

Since 2008, GTCP scientific researchers have patrolled the Gnaraloo Bay rookery, monitoring turtle breeding activities based on track and nest identification, with the information then entered into a GIS for mapping and analysis.

Ms Hattingh said the GTCP's partnership with Esri Australia provided them with the ability to better organise, map and understand the vast amounts of data collected each season and its implications for management activity.

"GIS is an essential capability for our analysis and decision-making, and enables us to better understand the Loggerhead turtle rookery on Gnaraloo's coastline," said Ms Hattingh.

"Through our partnership with Esri Australia, we have comprehensively improved our reporting quality, which has ensured our research commands greater status, recognition and credibility."

Ms Hattingh said the GTCP's results were a valuable contribution to the scarce amount of information concerning sea turtles along the wild Ningaloo coast.

"Our data sets play an important role in complimenting the research of other concerned turtle scientists, including those at the DEC WA, the CSIRO (Tasmania), the University of West Australia and James Cook University in Queensland," Ms Hattingh said.

"This makes it all the more important that we continue to invest our time, passion and resources into the program and continue to provide new insights based on reliable information to the scientific world, governments and the public."

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### **About Gnaraloo**

The Gnaraloo Bay Rookery is one of two mainland areas in Western Australia with the highest nesting densities for Loggerheads (the other being in Cape Range National Park). Loggerheads are endangered species (IUCN Red List 2011). For seasonal field diaries, photos and videos, please see Gnaraloo Turtle Conservation Program on Facebook.

### **About Esri Australia**

Esri Australia has a 33 year history of providing location intelligence and data mapping solutions that help organisations make smart business decisions. The combination of local expertise and world-leading Esri GIS technology has helped thousands of government departments and commercial organisations to turn their data, information and knowledge into collective insight to reveal opportunity.

### **About GIS**

Geographic Information Systems are a key piece of technology used in thousands of organisations Australia-wide from the military and government, to the insurance and mining sector. Australia's GIS industry currently stands at over \$2.1 billion and more than 300,000 organisations across the world use Esri GIS.