

Extract from Hansard

[ASSEMBLY COMMITTEES A AND B SUPPLEMENTARY INFORMATION — Thursday, 26 May 2016]

p630b-632a

Mr Dave Kelly

Division 57: Fisheries —

[Supplementary Information No A11.]

Question: Mr D.J. Kelly asked for the details of any current external contracts, or planned contracts across the forward estimates, that the Department of Fisheries has in the area of shark mitigation.

Answer: Details of contracts with external providers related to shark mitigation are provided in the table below:

	Title	Description	Contractor
1	Development and Implementation of a Community Engagement Strategy for the Management of Shark Hazards in Western Australia. Number: DOF104/2011	Development of SharkSmart website, following community perceptions survey.	Marketforce Limited
2	WA Department of Fisheries Shark Sightings Notification System – application hosting and fault support.	Application hosting and fault support for web-hosted data management system used to post information from shark sightings reported to the Water Police Coordination Centre. Posts information automatically to SharkSmart website, @SLSWA twitter and texts information to land managers.	Redcoal Pty Ltd
3	Telstra Integrated Messaging System	Text message advice sent to land and operational managers when a tagged shark is detected within range of one of 25 satellite linked receivers as part of the Shark Monitoring Network.	Telstra
4	Supply and Delivery of Acoustic Receivers and Associated Equipment DOF16/2015.	Supply and delivery of acoustic telemetry equipment used as part of the shark monitoring network. This contract includes VR4 – Global Iridium Acoustic Receivers, VR4 hydrophone and cables, and VR4G – Global Iridium Acoustic Receiver Data Service.	VEMCO – A division of AMIRIX Systems Inc
5	Supply and Delivery of Acoustic Telemetry Equipment and Tags DOF2/2013.	Supply and delivery of acoustic telemetry equipment and fish tags, used as part of the shark monitoring network to acoustically tag sharks, and receivers which detect and record, or detect and transmit the data. This contract includes VR4 – Global Iridium Acoustic Receivers, VR4 hydrophone and cables, and VR4G – Global Iridium Acoustic Receiver Data Service, VR2 data-logging receivers and V16 fish tags.	VEMCO – A division of AMIRIX Systems Inc
6	Supply and Delivery of Customised Meridian Markers for the Shark Monitoring Network. DOF15/2015	Supply of customised meridian marker buoys for the deployment of VR4 Global satellite linked receivers currently in use in the Shark Monitoring Network.	Fendercare Australia Pty. Ltd.

Contracts planned across the forward estimates include services related to ongoing servicing and maintenance of the shark monitoring network and the communication of shark sighting notifications (see Table numbers 2 to 6).

The provision of these services by contract, or other method, will be determined by operational and business needs.

The contract for community engagement (described in Table line number 1) expires in October 2016. This service will move to a maintenance phase to host and provide fault support for the SharkSmart website and activity map. The provision of these services by contract, or other method, will be determined by operational and business needs.

[Supplementary Information No A12.]

Question: Mr D.J. Kelly asked for more detail about what resources the Department of Fisheries allocates to assess the impact of climate change on Western Australian fisheries.

Answer: Understanding environmental effects on fisheries is a key part of fisheries' stock assessments. This work has been extended to assess how climate change affects fisheries. When major changes occur to fisheries as a result of environmental changes, the Department of Fisheries (Department) reallocates resources to deal with priority high risk issues. It also seeks external funding for special projects from the Fisheries Research and Development Corporation (FRDC) to provide additional resources. In 2015 the Department reported on an FRDC project (grant of \$450,000) in collaboration with CSIRO and University of Western Australia oceanographers:

Caputi, N., Feng, M., Pearce, A., Benthuisen, J., Denham, A., Hetzel, Y., Matear, R., Jackson, G., Molony, B., Joll, L., and Chandrapavan, A. (2015). Management implications of climate change effect on fisheries in Western Australia: Part 1 Environmental change and risk assessment. FRDC Project 2010/535. Fisheries Research Report 260, Department of Fisheries, Western Australia, 180pp
DOI: 10.13140/RG.2.1.2240.7200

Caputi, N., Feng, M., Pearce, A., Benthuisen, J., Denham, A., Hetzel, Y., Matear, R., Jackson, G., Molony, B., Joll, L., and Chandrapavan, A. (2015). Management implications of climate change effect on fisheries in Western Australia: Part 2: Case studies. FRDC Project 2010/535. Fisheries Research Report 261, Department of Fisheries, Western Australia, 156pp

Two major case studies were examined in the report, the western rock lobster fishery and the effect of the marine heat wave of 2010/11. The western rock lobster fishery was assessed as part of a separate FRDC project and subsequent reviewed scientific papers were produced:

Caputi, N., Feng, M., de Lestang, S., Denham, A., Penn, J., Slawinski, D., Pearce, A., Weller, E., How, J. (2014). Identifying factors affecting the low western rock lobster puerulus settlement in recent years. Fisheries Research Report No. 255, Department of Fisheries, Western Australia. 155pp.
<http://frdc.com.au/research/final-reports/Pages/2009-018-DLD.aspx>

de Lestang, S., Caputi, N., Feng, M., Denham, A., Penn, J., Slawinski, D., Pearce, A., and How, J. (2014) What caused seven consecutive years of low puerulus settlement in the western rock lobster fishery of Western Australia? ICES Journal of Marine Science, doi: 10.1093/icesjms/fsu177.

The marine heat wave was also examined by two workshops (hosted by the Department) with input from scientists from CSIRO, universities and other government departments. The outcomes were reported in the following scientific papers:

Pearce, A., Lenanton, R., Jackson, G., Moore, J., Feng, M., and Gaughan, D. (2011). The "marine heat wave" off Western Australia during the summer of 2010/2011. Fisheries Research Report 222, Department of Fisheries, Western Australia, 36pp.

Caputi, N., Jackson, G., and Pearce, A. (2014). The marine heat wave off Western Australia during the summer of 2010/11 – 2 years on. Fisheries Research Report 250, Department of Fisheries, Western Australia. 36pp.

Caputi, N., Kangas, M., Hetzel, Y., Denham, A., Pearce, A. and Chandrapavan, A. (2016). Management adaptation of invertebrate fisheries to an extreme marine heat wave event at a global warming hotspot. Ecology and Evolution. doi: 10.1002/ece3.2137 <http://onlinelibrary.wiley.com/doi/10.1002/ece3.2137/full>