

Washington Post Article On Stranding Of Whales In Madagascar Is Based Upon A Report Which Violates the Data Quality Act

I. EXECUTIVE SUMMARY

The October 7 Edition of the Washington Post has an article which states:” *Scientists link sonar mapping to '08 whale stranding*”.

The *Post* article is based upon the report of a panel established by the International Whaling Commission which fails to incorporate the views of all the experts who advised the panel. In fact, when the totality of the record is examined the “Panel Report” is in violation of the Data[aka Information] Quality Act.

CRE compliments the Washington Post for publishing competing views which was not the case with the foreign press nor the ISRP

Federal agencies are prohibited by existing law to use any information which is not compliant with the Data Quality Act.

Approximately 100 melon-headed whales stranded on a beach and in a river system in northwest Madagascar during May-June 2008. Approximately 75 of these whales ultimately died, probably from various causes related to their being out of their normal open-ocean environment.

Several years after the fact, the International Whaling Commission (“IWC”) “facilitated” preparation of a report on these strandings. A final report was published was published in September 2013.¹

¹ “Final report of the Independent Scientific Review Panel investigating potential contributing factors to a 2008 mass stranding of melon-headed whales (*Peponocephala electra*) in Antsohihy, Madagascar,” Southall *et al.* (“ISRP Report”), available at <http://iwc.int/2008-mass-stranding-in-madagascar> .

The ISRP Report exonerates nearby use of seismic airguns for oil and gas exploration as a possible cause of these strandings,. The Report implicates nearby use of a multi-beam echosounder system (MBES) for oil and gas exploration as a possible cause.

The ISRP Report's conclusion about seismic is clearly correct because no seismic airguns were used in the area before the strandings. Moreover, there is no evidence that seismic airguns can cause strandings.

The ISRP Report's conclusions about MBES are incorrect for the following and other reasons:

- the Report's time-line for the strandings has errors and is inconsistent with the best available evidence;
- the best available evidence (*e.g.*, satellite images of stranded whales on May 20) indicates that the strandings began before oil and gas MBES began on May 29;
- the Report's conclusions are inconsistent with necropsy results, which show no sound-induced damage;
- the Report's conclusions are inconsistent with the absence of any other strandings from MBES use in Madagascar or anywhere else;
- There is no evidence supporting the Report's speculation as to why previous MBES use in the area did not cause strandings; and
- Inshore surface current forcing downwelling conditions in the area have previously been associated with strandings in Madagascar, and are a much more plausible cause of these strandings.

The ISRP Report recommends that its conclusions regarding MBES “be considered in future environmental assessments, operational planning, and regulatory decisions.”²

CRE has a long-standing institutional commitment to ensuring that U.S. agencies meet U.S. Information Quality Act (“IQA”) standards for accuracy, reliability, and completeness, with regard to strandings and other regulatory issues.³ The ISRP report does not meet these IQA standards and should not be used.

² ISRP Report, page 5, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

³ See *e.g.*, CRE is widely recognized as the initial champion of the IQA. See an article Naval Law Review, http://www.thecre.com/pdf/20120301_NavalLawReview.pdf .

II. THE “ EVIDENCE” IS INCONSISTENT WITH OTHER STUDIES WHICH EXAMINED ALLEGED STRANDINGS CAUSED BY MBES OR ANY OTHER ANTHROPOGENIC SOUND

The ISRP Report exonerates nearby use of oil and gas seismic airguns as a possible cause of these strandings:

“While aspects of this event will remain unknown, the ISRP systematically excluded or deemed highly unlikely nearly all potential reasons for the animals leaving their typical pelagic habitat and entering the Loza Lagoon (an extremely atypical area for this species). This included the use of seismic airguns in an offshore seismic survey several days after the whales were already in the lagoon system, which was originally speculated to have played some role but in the view of the ISRP clearly did not.”⁴

This conclusion is clearly correct because seismic airguns were not used in the area before the strandings. This conclusion is also consistent with the overwhelming weight of scientific evidence that seismic does not cause strandings. As NMFS recently explained:

“To date, there is no evidence that serious injury, death, or stranding by marine mammals can occur from exposure to airgun pulses, even in the case of large airgun arrays.”⁵

The ISRP Report emphasizes that there is “no unequivocal and easily identifiable single cause of this [stranding] event” because

“The extent to which causality may be unequivocally determined here is limited by: (1) the remote and harsh conditions of the stranding area; (2) the time required to mount the stranding response and investigation; (3) the time that has passed since the event; (4) the fact that the location and behavioral state of the animals just prior to the first known observations of them within the lagoon

⁴ ISRP Report, page 4, at <http://iwc.int/2008-mass-stranding-in-madagascar> . See also ISRP Report, page 59: “The ISRP concludes that the use of seismic airguns in the shallow hazard surveys for a short period in early June clearly played no role as either an initial trigger or secondary factor in this event.”

⁵ Page 25838 of NMFS’ Federal Register notice available online at <http://www.gpo.gov/fdsys/pkg/FR-2012-05-01/pdf/2012-10386.pdf> .

system is unknown; and (5) limited information on the type and nature of behavioral responses of melon-headed whales to multi-beam echo sound.⁶

Nevertheless, and despite all these caveats and limitations, the ISRP Report states:

“ a high-power 12 kHz multi-beam echosounder system (MBES) [was] operated intermittently by a survey vessel moving in a directed manner down the shelf-break the day before the event, to an area ~65 km offshore from the first known stranding location. The ISRP deemed this MBES use to be the most plausible and likely behavioral trigger for the animals initially entering the lagoon system.”⁷

This conclusion about MBES is inconsistent with the evidence.

For example, Woods Hole Oceanographic Institution and Harvard Medical School examined several of the stranded whales after they died. Their examinations found no evidence that sound contributed to their strandings or deaths. Their examination report explains:

“All findings noted are consistent with chronic or acute infection, parasitic infestation and response, and fibrous or calcified adjunct formations. None of the findings are consistent with acoustically derived auditory damage or recent, acute hearinglosses. There is no significant finding consistent with acoustic trauma, blast injury, or impulse noise injury.”⁸

There are also significant problems with the ISRP Report’s time-line for the strandings. Contrary to the Report’s conclusions, the best available evidence indicates that the strandings occurred before oil and gas MBES was used in the area.

The ISRP Report assumes that the whales started stranding on May 30, 2008, which would be shortly after the oil and gas vessel used MBES in the area on May 29.⁹ The report’s assumption is inconsistent with whale deaths beginning May 31 near Antsohihy. This date is too soon for their deaths to be caused from starvation and other maladies induced by their being out of their normal habitat. However, if the whales had been wandering through the lagoon system for days without their natural prey, then they could have started succumbing to starvation by this time. The WCS/IFAW Report on the strandings suggests that necropsies show the animals had probably been without access to

⁶ ISRP Report, pages 3-4, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

⁷ ISRP Report, page 4, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

⁸ Ketten, D. R., Report related to CT Scans, page 2, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

⁹ See, e.g., pages 3-4, report at <http://iwc.int/2008-mass-stranding-in-madagascar> .

normal prey for at least a week.¹⁰ This indicates that the animals were stranded earlier than previously assumed, which means earlier than MBES or any other sounds from oil and gas exploration.

As another example of time-line problems, on May 20, 2008, satellite images show approximately 20 three-meter long features on a beach south of the mouth of Loza river near Analalava (see satellite report). Expert satellite interpreters agree that these beached features are “the decaying carcasses of small whales.” This stranding site was incorrectly identified by WCS as Ampasindava when in fact the May 20 stranding site is more than 17 kilometers from Ampasindava. This is an important point because WCS and others reported that they interviewed residents of Ampasindava in early June 2008 and they said there were no whales on their beach. This was the key reason the ISRP discounted the May 20 satellite photos, which indicate that the stranding started at least 20-days before any oil and gas sounds (seismic or MBES) in the area.

Dr. Sam Purkis (National Coral Reef Institute (Assoc. Professor, Oceanographic Center, Nova Southeastern University) independently reviewed the May 20 and June 14 satellite imagery data. Dr. Purkis concludes: “On the basis of these three remote sensing images, I believe it to be a reasonable explanation that the features are the decaying carcasses of small whales.”

May 20th is nine days prior to the arrival of the oil and gas vessel to the survey site.

The ISRP Report dismissed these satellite image features being whales because “whales do not line up on the beach in this manner”. A simple search on Google images for whale strandings does indeed show several cases with a more or less linear orientation of stranded whales like the May 20 images. June 14 images show that these “beached features” have been moved around in the surf and now appear in an erratic pattern, which is exactly what one would expect after 24 days of exposure near the high water mark on a beach.

There is another, more likely cause of the strandings given the evidence of an earlier date for their beginning. The ISRP report explains:

“Melon-headed whales have been known to utilize convergence zones created by downwelling and upwelling eddies (Woodworth et al, 2012). One of these eddies passed by the region of interest offshore from the Loza Lagoon systems on 12 May 2008, changing an upwelling condition to a downwelling one. This would be associated with the development of a coastward surface current directed toward the lagoon. Sea surface temperatures in the region near the entrance to the lagoon rose by more than 0.5° C over a three-day period, peaking on 15 May associated with the strongest incoming surface current, and staying warm for several days. This is notable as previous marine

¹⁰ WCS & IFAW, Final Report, page 24, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

mammal stranding events have been associated with the transition from upwelling to downwelling conditions (Walker, et al., 2005). ... Interestingly, a similar surge of inshore surface current forcing downwelling conditions occurred near the northern tip of Madagascar on 25-27 November 2007, just prior to the discovery of a stranded group of melon-headed whales near Nosy Hara in extreme northwest Madagascar”

By contrast to these inshore surface current forcing downwelling conditions, which are associated with strandings, the ISRP Report admits that MBES use in this area and elsewhere have not previously caused strandings:

“Similar MBES systems to the 12 kHz source used in this case are in fact commonly used in hydrographic surveys around the world over large areas without such [STRANDING] events being previously documented. In fact, a very similar MBES system was apparently used in a survey in the general area (and particularly the Mahajanga harbor area to the south) for some period during April and early-mid May 2008.”¹¹

The ISRP Report is referring here to a French Naval Hydrographic and Oceanographic Service vessel (Beautemps- - Beupré), which was conducting hydrographic surveys in the area. Based on internet sources, the Beautemps-Beaupre continuously used marine echosounders to map the sea bottom bathymetry during its transits.¹² In addition to this vessel’s transit along the Northwest coast of Madagascar, it also conducted a hydrographic survey of the port of Mahajanga and surrounding area during 5 weeks in April and May 2008. Its work included mapping port of Mahajanga approaches to and from deeper water. The echosounders aboard the Beautemps- - Beupré have the same model numbers as those on oil and gas seismic vessel in question. The vessel track for this vessel is very similar to the May 29, 2013, track for the oil and gas seismic vessel.

The ISRP Report’s speculation that the French MBES events only sensitized the whales to these sound frequencies, and that the same MBES sound source from the oil and gas seismic vessel then frightened the whales and caused them to swim up a river system, has no evidentiary support and is arbitrary.

The ISRP Report’s conclusion about MBES and these strandings is inconsistent with NMFS’ conclusion in a recent action permitting the use of both seismic and MBES:

“Based upon the best available science, NMFS believes that the brief exposure of marine mammals to one pulse, or small numbers of signals, from the MBES

¹¹ ISRP Report, page 5, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

¹² See, e.g., <http://www.ifremer.fr/sismer/UK/catal/campagne/campagnea.htq1?crno=8090080> .

is not likely to result in the harassment of marine mammals.”¹³

In this recent action, NMFS extensively considered “the best available science” on MBES, and explained:

“whether or not the airguns are operating simultaneously with the other sources, marine mammals are expected to exhibit no more than short-term and inconsequential responses to the MBES... given their characteristics (e.g., narrow, downward-directed beam) and other considerations described previously. Such reactions are not considered to constitute ‘taking’ (NMFS, 2001).”¹⁴

The ISRP Report is also inconsistent with the U.S. National Science Foundation’s conclusions about MBES Effects. The NSF’s Final Programmatic Environmental Impact Statement for its offshore sound producing actions states:

“Operation of MBESs... is not likely to impact odontocetes [e.g., melon-head whales]. The intermittent and narrow downward-directed nature of the MBES... would result in no more than one or two brief ping exposures of any individual odontocete given the movement and speed of the vessel; such brief exposure to this sound is not expected to cause injury or PTS based on results of limited studies of some odontocete species.”¹⁵

The ISRP Report itself heavily qualifies its statements about possible MBES effects. For example:

“This is the first known such marine mammal mass stranding event closely associated with relatively high-frequency mapping sonar systems.”

“Offshore exploration for oil and gas deposits has occurred with increasing regularity in the Sofia region, with at least nine seismic surveys conducted during the period from 2004- - 08, most occurring in the Ampasindava and Mahajanga lease blocks.” [AND THERE ARE NO STRANDINGS ASSOCIATED WITH THE EARLIER SEISMIC SURVEYS].

¹³ L-DEO Takes of Marine Mammals Incidental to Specified Activities; Low- Energy Marine Geophysical Survey in the Central Pacific Ocean, May through June, 2012 Page 19253, at

<http://regulations.justia.com/regulations/fedreg/2012/03/30/2012-7717.html>.

¹⁴ Page 19259, at

<http://regulations.justia.com/regulations/fedreg/2012/03/30/2012-7717.html>.

¹⁵ Page ES-24, at <http://permanent.access.gpo.gov/gpo13140/nsf-usgs-final-eis-oeis-with-appendices.pdf>.

“Such MBES systems have not been previously identified as being associated with marine mammal stranding events.”

“There may well be a very low probability that the operation of such sources [MBES] will induce marine mammal strandings—animals may simply avoid them or even ignore them most of the time.”¹⁶

III. U.S. AGENCIES SHOULD NOT USE THE ISRP REPORT BECAUSE IT DOES NOT MEET IQA STANDARDS

Despite its admitted qualifications, caveats and uncertainties, the ISRP Report recommends that its conclusions regarding MBES “should be considered in future environmental assessments, operational planning, and regulatory decisions...”; even though “this risk may arguably be very low given the extensive use of such MBES systems historically and the lack of direct evidence of such [stranding] responses previously....”¹⁷

Contrary to this recommendation, the ISRP Report should not be used by U.S. agencies because it does not pass U.S. IQA standards for accuracy and reliability. For example, and as explained above:

- the Report’s time-line for the strandings has errors and is inconsistent with the best available evidence;
- the best available evidence (*e.g.*, satellite images of stranded whales on May 20) indicates that the strandings began before oil and gas MBES began on May 29;
- the Report’s conclusions are inconsistent with necropsy results, which show no sound-induced damage;

¹⁶ ISRP Report, pages 4, 15, 53, and 58, at <http://iwc.int/2008-mass-stranding-in-madagascar> .

¹⁷ ISRP Report, pages 5, 59 at <http://iwc.int/2008-mass-stranding-in-madagascar> .

- the Report’s conclusions are inconsistent with the absence of any other strandings from MBES use in Madagascar or anywhere else;
- There is no evidence supporting the Report’s speculation as to why previous MBES use in the area did not cause strandings; and
- Inshore surface current forcing downwelling conditions in the area have previously been associated with strandings in Madagascar, and are a much more plausible cause of these strandings.

This is not the first time that a whale stranding report has failed to comply with the U.S. IQA standards. Previously, CRE explained to both the IWC and the NMFS that a report on whale strandings in Brazil should not be used by the U.S. agencies because it did not meet the IQA standards. CRE’s letter explained:

“A US federal statute called the Data Quality Act [IQA] requires that most federal government agencies meet specified quality standards before they make scientific or other information publicly available. This statutory requirement means that federal government agencies must ensure that all scientific information they use or rely on meets the [IQA] standards.

These quality standards are implemented first by government-wide guidelines developed and published by the federal government’s Office of Management and Budget (“OMB”).

The [IQA] requires that the other federal government agencies develop and publish their own, agency- specify quality guidelines. The agency-specific guidelines must be approved by OMB and must be consistent with OMB’s government-wide guidelines. For example, NOAA has developed and published [IQA] guidelines that apply also to the NMFS, which has US federal government jurisdiction over many issues relevant to the conservation of cetaceans and other marine mammals.

Like all other federal agency [IQA] guidelines, the NOAA/NMFS guidelines require that scientific studies used or relied on by the agencies must be accurate and reliable. The NOAA/NMFS guidelines discuss this requirement in part as follows:

Objectivity ensures that information is accurate, reliable, and unbiased, and that information products are presented in an accurate, clear, complete, and unbiased manner. In a scientific, financial, or statistical context, the original and supporting data are generated, and the analytic results are developed, using commonly accepted scientific, financial, and statistical methods.

The NOAA/NMFS guidelines expressly state that international reports must meet US [IQA] standards before NOAA/NMFS can use or rely on the reports:

Third-party Information. Use of third-party information from both domestic and international sources, such as states, municipalities, agencies and private entities, is a common practice in NOAA. Collaboration on interjurisdictional studies and monitoring programs, incorporation of on-site observations into NOAA products, and utilization of global observation systems are just a few examples of when third party information is used. NOAA's information quality guidelines are reality-based, i.e. , not intended to prevent use of reliable outside information or full utilization of the best scientific information available. Although third-party sources may not be directly subject to Section 515, information from such sources, when used by NOAA to develop information products or to form the basis of a decision or policy, must be of known quality and consistent with NOAA's information quality guidelines. When such information is used, any limitations, assumptions, collection methods, or uncertainties concerning it will be taken into account and disclosed.”¹⁸

IV. CONCLUSION

The ISRP Report violates the Data Quality Act for the following reasons:

Objectivity

The report fails to provide compelling evidence and reasoning as to why other likely causes for the stranding were dismissed by the panel.

These other causes include:

- (a) overturning of water masses have shown in a peer reviewed published reports to have been the likely cause of a number of strandings off Florida,
- (b) the French Navy conducted operations in the affected area prior to the arrival of the vessel under contract to perform surveys around Madagascar and,
- (c) a 4.4 magnitude Sea quake nearby could have causes the whales to swim toward the bay and lagoon

¹⁸ U.S. GOVERNMENT AGENCIES CANNOT USE AN IWC SCIENTIFIC COMMITTEE REPORT BECAUSE IT DOES NOT MEET DATA QUALITY ACT STANDARDS, pages 4-6 (footnotes omitted), at <http://thecre.com/pdf/20051228.pdf> .

Unbiased

The ISRP failed to seek and reconcile the views of experts who differed with the conclusions reached by the ISRP.

CRE compliments the Washington Post for publishing competing views which was not the case with the foreign press nor the ISRP.

The Center for Regulatory Effectiveness (CRE) is regulatory watchdog located in Washington, DC and was the initial proponent of the Data Quality Act.

The Center for Regulatory Effectiveness

www.TheCRE.com