Critical comment on the Fraser Island Dingo Population study Stage 1:

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Fraser Island dingo population – knowledge deficit

Two closely related questions, the answers to which are central to any viable management strategy for the Dingo population on Fraser Island are:

What is the size, sex/age composition and distribution of the Fraser Island dingo population?

and,

What is the size of the *effective breeding* population?

An answer to the second of these questions is particularly crucial. Without this knowledge, it cannot be known whether immediate management actions are detrimental to the long-term survival of the dingo on the Island or not. If you can't answer these questions with confidence, then the claim to sustainable management cannot be made; the sustainability objective of the Fraser Island Management Strategy cannot be met.

Indeed, the crucial nature of the answers to these questions is recognised in the Fraser Island Management Strategy itself. In the 2009 Audit of the FIDMS by Dr Laurie Corbett, it is stressed more than once how crucial it is to ensure that the management strategy itself does not undermine the sustainability of the Dingo population. To prevent such a dire outcome, he insists on good data about the size and distribution of the dingo population and the ability of park staff to understand the implications of such data. Referring to an unpublished Fraser island dingo population study, commenced in 2002, Corbett states:

> The current [population] results are … 'provisional' and possibly represent an inadequate or misleading baseline for Park Managers to base current and future management decisions. It is therefore strongly recommended that these research data be critically assessed as soon as possible **so that the current rate of dingo mortality by humane destruction and accident can be reconciled with a sustainable natural dingo population on Fraser Island.** (FIDMS Audit, 2009, p. 10)(my emphasis)

Again, this statement highlights the significance of a high level of certainty about the size and composition of the Fraser Island dingo population for sustainable management. It also makes

it clear that, at the time of the 2009 audit, such knowledge about the population was not held by the Queensland authorities responsible for the enactment of the management strategy.

In relation to the potentially damaging impact of dingo management practices (discouraging all human contact, culling, hazing and denial of dingo access to beach areas) on the Island, Corbett states:

> …it is apparent that the intensive virulence and dingo control in tourist areas in recent years has 'educated' dingoes so that most now live and feed in the forest. It is therefore vital to regularly assess dingo abundance, distribution and diet; and food availability (variety and abundance) in forest areas to ensure that the Fraser Island dingo population is sustainable over the long term. (FIDMS Audit, 2009, p. 10)

Similarly, because management is now heavily focussed on restricting dingoes to the forested areas of the Island, remote from human activity, Corbett emphasises how crucial it is to know about the size and distribution of the dingo population in forest areas:

> …these data [un-peer-reviewed and unpublished population data] are likely to be vital in estimating the current size and distribution of the Island dingo population, **and thus assessment of whether or not dingo numbers have been culled below a naturally sustainable level.** (FIDMS Audit, 2009, p. 9)(my emphasis)

This emphasis on a sound empirical basis for managing the Fraser Island dingo population is also reflected in statements made in June 2009, the Climate Change and Sustainability Minister, Kate Jones, when she announced that an independent audit of the FIDMS (by L. Corbett - he architect of the strategy) would ensure the maintenance of a healthy dingo population on the Island:

> I want to be fully satisfied that Dingoes are prevalent on the island. (Media Release, Hon Kate Jones, 21 July, 2009)

Knowledge gap persists

It is disappointing, therefore, that on examination of the Interim Report Stage 1 of the FI Dingo Population Study (July 2010), despite recent research, these crucial questions concerning size and composition of the Fraser Island dingo population are still not answered with any confidence.

The study used the CMR (capture, mark, recapture) techniques as well an intensive sighting surveys.

In practice, the execution of these techniques proved problematic:

- Because in inaccessibility of much of Fraser Island, only 25% of the land area of the Island was included in this stage of the study (Interim Report Stage 1, July 2010, p. 6). This meant that, for the greater part, forested regions were not included for the CMR research, even though knowledge of the dingo population in forested areas was given a high priority by the 2009 management-strategy audit.

- At the time of the Interim Report publication (July 2010), 'most' of the CMR work had been limited to 'the easily accessible eastern beach, where visible Dingo activity is highest and management issues are more evident' (Interim Report Stage 1, July 2010, p. 7). 'Most' is not quantified.

- Dingo sighting survey results are equally problematic. 810 dingo sightings were recorded, but this count included multiple sightings of the same animals (Interim Report Stage 1, July 2010, p. 8).

How great an effect such multiple sightings had in inflating the actual number of dingoes observed is not discussed in the Report.

While the Report states that 611 or 67% of the sightings 'positively identified the dingo', the proportion of multiple sightings that occurred amongst this 611 is not reported. Why is not clear. Presumably, since these were positive sightings of individual animals, the extent of multiple counting could easily have been calculated for this subgroup.

As a result of these shortcomings, the results reported in the Interim Report do not provide credible insight into the size, distribution and age/sex composition of the dingo population on Fraser Island.

It is also of concern that the Report does not present any *analysis* of the observations reported. The Report jumps from a cursory description of observations to a preliminary conclusion without any explanatory account of how these observations support the conclusions made. A simple description of observations does not comprise analysis.

Despite the unreliable and incomplete nature of the observations in the Report, it is nevertheless asserted that the Fraser Island dingo population is in good condition, and that the observations 'strongly suggest a current population in excess of 200 individuals' (Interim Report Stage 1, July 2010, p. 6). On the contrary, unfortunately, on the basis of the information presented, it may be concluded that Stage 1 of the Fraser Island population study is based on unreliable observations, is incomplete and reads as if these conclusions were preconceived.

Publication and Peer Review of findings

This major dissociation between observations and conclusions raises a number of questions about the intention that the Interim Report will be subject to peer review for publication.

Will this peer review process be for publication in a double-blind peer reviewed academic journal, as stipulated in the Fraser Island Dingo Management Strategy? The strategy requirement is for peer-viewed publication in an academic journal. Strategy 1, Action 25 requires that:

> *All research projects must submit key results for publication in a peer-reviewed scientific journal within 12 months of completing University requirements…*

If the reference to peer review in the Interim Report is intended to address this requirement, why is it indicated that peer review will be conducted by persons who have participated in the research? As the Report stands, this suggestion is extraordinary. Dr Lee Allen, Dr Luke Leung, Dr Gregg Baxter and Assoc. Prof. Darryl Jones are all both thanked for the participation in the research (Interim Report Stage 1, July 2010, p. 2) and proposed as peer reviewers (Interim Report Stage 1, July 2010, p. 6). By any normal academic standard, persons cannot peer review research for publication which they have advised on or have been otherwise involved with.

The Interim Report does not inspire confidence that the Fraser Island Dingo Management Strategy is being implemented in a way that will ensure the sustainability of the Fraser Island dingo population.

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While not a professional ecologist or environmental scientist, I am a professional academic researcher of 20 years standing, and have regularly published in academic peer-reviewed publications, and have peer-reviewed articles for academic publication. Apart from academic publication, I have also co-authored numerous research reports for local, state and federal government departments.