

A Call for the Reassessment of the Use and Promotion of Info-Gap Decision Theory in Australia

Last Update: November 21, 2008

Australia's continuing fascination with Info-Gap decision theory is an intriguing story. While research conducted in Australia has shown Info-Gap decision theory to be fundamentally flawed, over the past five years Australia has managed to become a major international stronghold of this flawed theory.

For those unfamiliar with this story: in Australia, Info-Gap decision theory has become particularly popular in the areas of conservation biology and applied ecology. Suffice it to mention the several references to Info-Gap in A Guide to AEDA, the 1-day workshop on Info-Gap Theory and Its Applications in Biological Conservation (Melbourne, August 2, 2007), the recent 5-day workshop on Info-Gap Applications in Ecological Decision Making (Brisbane, September 15-19, 2008), the numerous publications on Info-Gap by AEDA members and Core Researchers and the Info-Gap related endorsed core materials on ACERA's website.

For instance, consider the following recommendation, in the Conclusions section in Moilanen et al (2006, p. 123)¹:

"... In summary, we recommend Info-Gap uncertainty analysis as a standard practice in computational reserve planning. The need for robust reserve plans may change the way biological data are interpreted. It also may change the way reserve selection results are evaluated, interpreted and communicated. Information-gap decision theory provides a standardized methodological framework in which implementing reserve selection uncertainty analyses is relatively straightforward. ..."

Note that four of the nine co-authors of the paper are AEDA Core Researchers.

In contrast, my website (www.moshe-online.com) provides numerous articles and presentations reporting on a painstaking formal analysis of Info Gap decision theory that identifies the fundamental flaws that this theory is riddled with.

So, this Call for a Reassessment reflects my position that it is time to face up to the sharp differences between these two conflicting evaluations of Info-Gap decision theory:

- The view that Info-Gap decision theory is a novel approach to decision-making under severe uncertainty that is well suited for the treatment of a variety of practical problems in ecology, conservation biology, finance, bio-security and so on.
- The position that a formal examination of Info-Gap decision theory reveals this theory to be a "voodoo" decision theory par excellence in the sense that not only does it lack sufficient evidence or proof, but also in its treatment of severe uncertainty being fundamentally flawed and its assessment of its role and place in decision theory being downright mistaken.

Hence, what is needed now is not another workshop on Info-Gap Applications but rather a forum on: What Exactly is Amiss With Info-Gap Decision Theory and Why It Is Important to be Fully Informed on This.

This is long overdue.

Since I have been active on this front for more than three years now, I am fully aware of the difficulties involved in getting Info-Gap users to confront the huge disparity between the high rhetoric describing Info-Gap's alleged role, mode of operation, capabilities, etc. and the facts detailing what this theory actually is and does.

But ... accept these facts they must and the sooner the better.

Moshe Sniedovich
Melbourne, November 14, 2008.
moshe@moshe-online.com

¹Moilanen A, Rungeb M.C, Elith J, Tyred A, Carmel Y, Fegraus E, Wintle B.A, Burgman M, Ben-Haim Y (2006) Planning for robust reserve networks using uncertainty analysis. *Ecological Modelling*, 199, 115-124.