

1 **DECISION TREES FOR DATA PUBLISHING MAY EXACERBATE**
2 **CONSERVATION CONFLICT**

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11 **To the editor** - Tulloch et al.¹ have rightly highlighted the need to increase
12 accessibility of species occurrence data to better support conservation efforts.
13 They present a tree to aid decisions regarding making data publicly available,
14 essentially a visual aid to existing protocols². However, due to its failure to
15 explicitly account for likely disagreements among stakeholders throughout the
16 process, we feel that the proposed method may inadvertently fuel conservation
17 conflicts³.

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19 Conservation conflicts occur “*when two or more parties with strongly held*
20 *opinions clash over conservation objectives and when one party is perceived to*
21 *assert its interests at the expense of another*”⁴. Such situations are becoming
22 increasingly widespread, and often involve the illegal killing of protected
23 species because of real or perceived adverse impacts on objectives other than
24 biodiversity conservation, such as livelihoods or income. High profile examples
25 include killings of hen harriers *Circus cyaneus* in the UK⁵, elephants *Loxodonta*
26 sp. using agricultural land in Africa⁶ and recolonizing wolves *Canis lupus* in
27 Europe⁷. These alternative objectives may be equally legitimate, but are not
28 necessarily recognised by all stakeholders^{3,4}.

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30 Decision trees are only effective if unequivocal decisions can be made at each
31 branch point, but conservation conflicts lead to potential stakeholder
32 disagreement at many branches^{3,4}. Such disagreements become highly
33 problematic for the proposed decision tree, particularly where data release may
34 increase risks of decline. For example, where Tulloch and colleagues’ tree asks
35 whether “*conservation/policy mechanisms are in place to mitigate declines*”,

36 the effectiveness of such measures might be limited, and their legitimacy
37 contested^{8,9}.

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39 As an example, consider the conservation of hen harriers in the UK. Illegal
40 persecution in areas managed for recreational shooting of grouse (*Lagopus*
41 *lagopus scoticus*) is likely to have contributed to rapid declines in numbers of
42 breeding hen harriers over recent decades. Although the species is legally
43 protected, such conservation measures are difficult to enforce. Thus, one
44 stakeholder might decide that conservation measures are in place, while
45 another might insist that they are not sufficiently effective. Working through
46 the decision tree for this example leads to highly contrasting decisions. Making
47 data available may increase risk of persecution, but restricting access to data
48 may be perceived as obstructive or authoritarian by some stakeholders,
49 decreasing trust, and thereby worsening the conflict. This is only one example
50 of potential conflict issues for the tree: stakeholders may disagree over most of
51 the individual decisions within it, ranging from the saliency or reliability of
52 certain data, to the feasibility or (cost-) effectiveness of some conservation
53 action, or even whether species are exploited in a particular area.

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55 Thus, the outcome of the decision tree regarding the release of biodiversity
56 data is likely to be contentious. Because the availability of data to one or more
57 stakeholders may be at the root of conservation conflicts, perceived pressure
58 on whether or not data should be made available may cause some
59 stakeholders to disengage entirely from the problem, rather than contribute to
60 a consensus⁸.

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62 Tulloch et al. are right to point out that to improve global conservation efforts,
63 biodiversity data should be made as available as possible. Indeed, if there are
64 no disagreements over data release, we question why the decision tree is
65 needed. However, such disagreements are by definition (part of) conservation
66 conflicts. For this reason, decision processes regarding data release (such as
67 the proposed tree) should take explicit account of conservation conflicts, and
68 include explicit structures to mitigate them^{4,10}. If they do not, they are at best
69 of limited use and at worst may exacerbate existing conflicts, or even fuel new
70 ones. This may be particularly the case when such considerations are made

71 only implicitly, because this risks strongly different interpretations of the basis
72 for decisions throughout the tree, again fuelling conflict.

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74 We believe that decision-making regarding biodiversity data release should not,
75 and cannot, be separated from the process to mitigate disagreements over
76 such decisions. This requires a more flexible approach than what is possible in
77 static decision trees, and one that instead focuses on process, feedback and
78 engaging all stakeholders – suitable frameworks for this are available
79 elsewhere^{4,10} and are widely applicable.

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