

Human-wildlife Conflicts



Steve Redpath, University of Aberdeen

Warrington 1993



Photo courtesy of the Warrington Guardian





Impact of human-wildlife conflicts

- **Impact on life** (eg. 800 people killed by lions in Tanzania 1990-2004. Packer et al. 2005)
- **Impact on livelihoods** (eg. Elephant damage worth ~\$3m pa. in India. Bist 2006)
- **Hidden costs** (eg. diminished wellbeing, opportunity costs, transaction costs. Barua et al. 2012)
- **Impact on conservation** (eg. Retaliatory killing of predators)
- **Increased polarisation & decrease trust**

Human-wildlife conflicts

- Conceptualising conflicts
- Revisiting harriers & grouse
- Alternative approaches to conflict resolution

Conflict definition

- “a state of opposition or hostilities”, “a fight or a struggle” and “a clashing of opposed principles etc”.

Oxford Concise Dictionary

Human-wildlife conflicts

Definition

“A human-wildlife conflict occurs whenever an action by human or wildlife has an adverse impact on the other”.

Conover 2002

Human-wildlife conflicts

Two elements:

- Human-wildlife impacts
- Human-human conflicts

Human-wildlife conflicts

- Last 100 papers (2010-present)
- 97 involved species with conservation interest.

Conservation v Livelihood 65

Conservation v Recreation 8

Conservation v Development 4

Conservation v Animal welfare 3

Conservation v Wellbeing 2

Conservation v Public health & safety 15

Other issues:

Public safety v Pest control 1

Public safety v Animal welfare 1

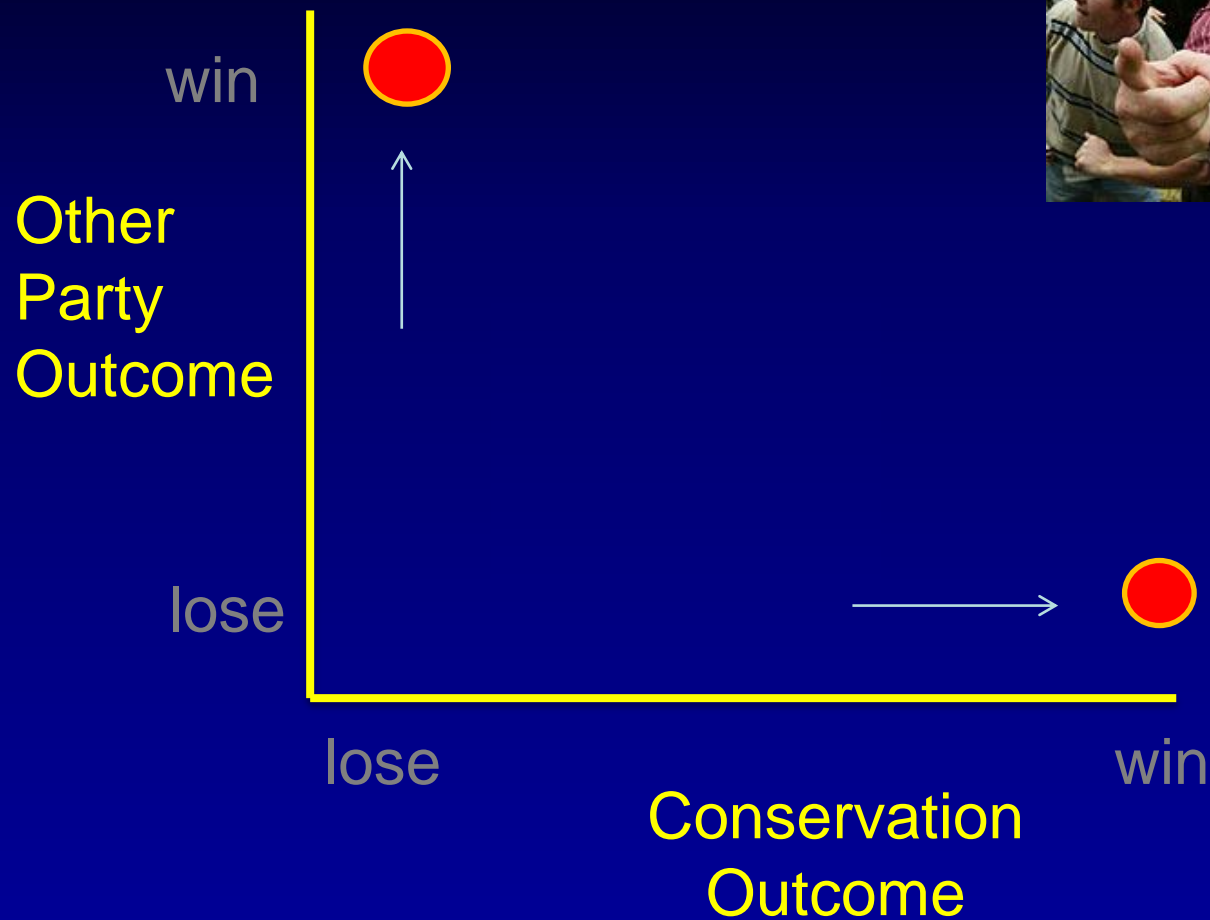
Livelihood v Livelihood 1

Conservation Conflicts

Situation that arises when: the strongly-held positions of two or more parties clash over conservation objectives and when one of those parties is perceived to assert its interests at the expense of the other.

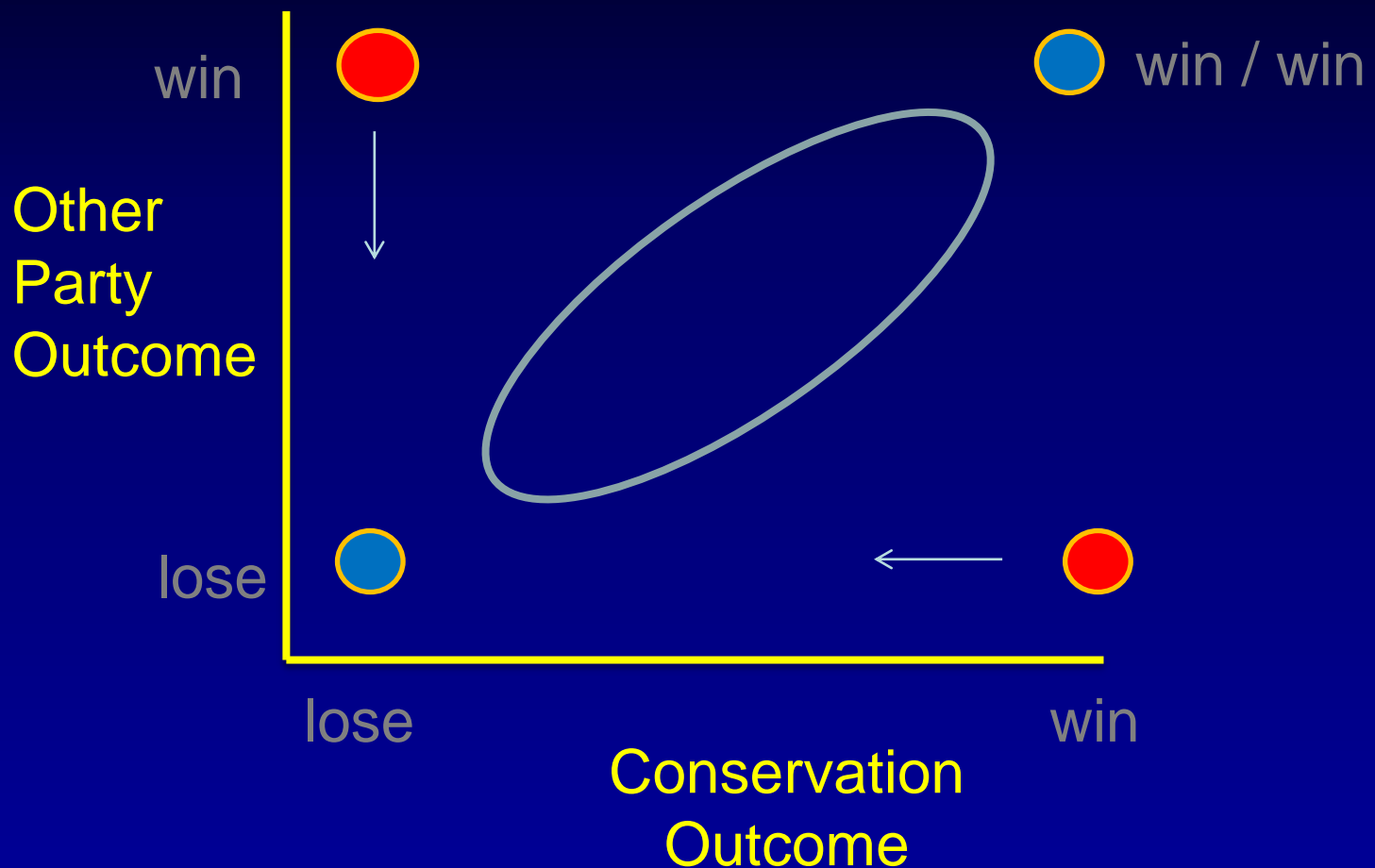


Conflict



Conflict resolution

Shared problem



Approach to H-W Conflicts

- Information deficit model
- Understand impact (Ecology)
- Provide solutions (e.g. technical or compensation) to mitigate impact
- Top-down
 - Protected areas
 - Enforcement & legislation

Analysis of a conservation conflict



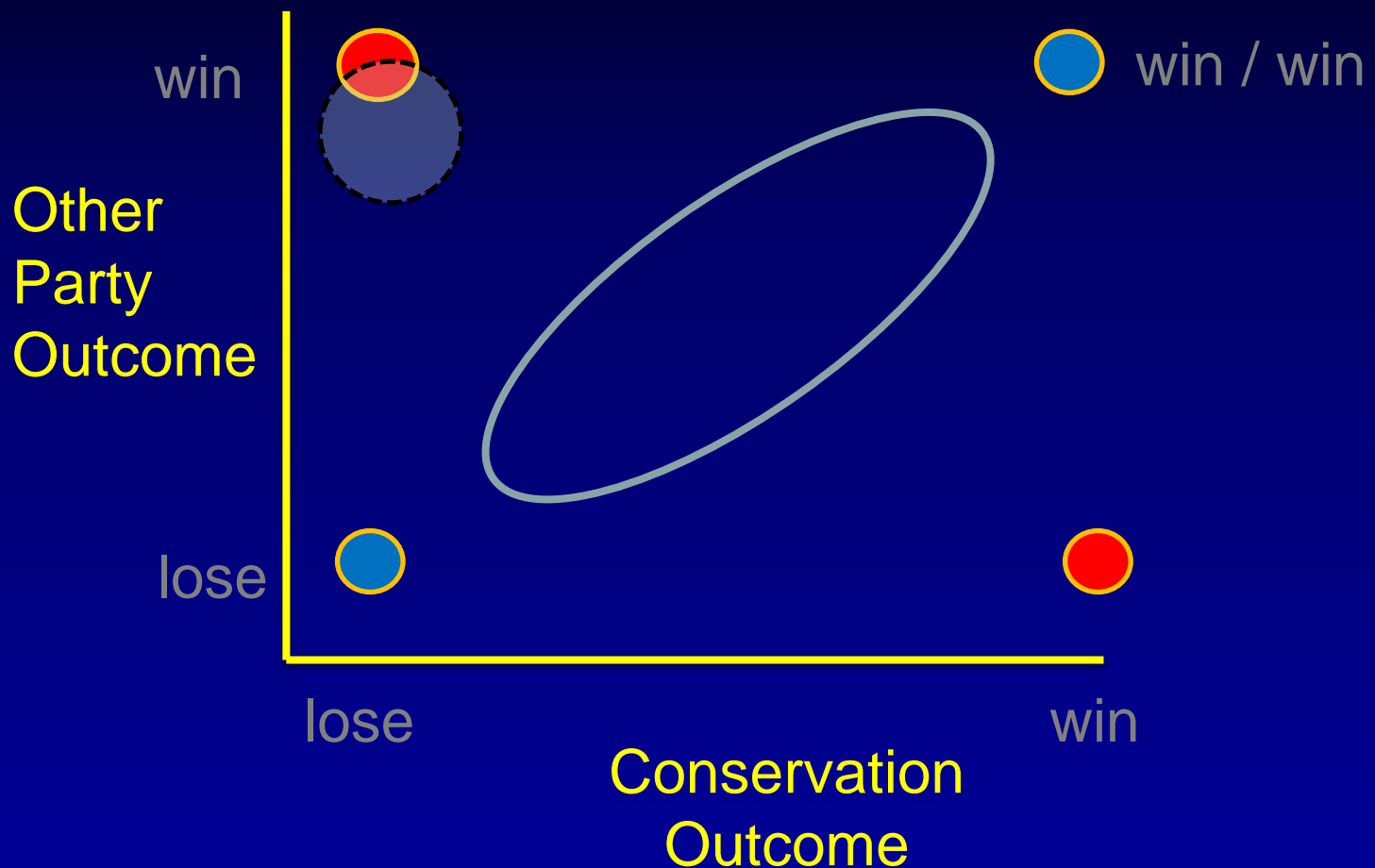
Has traditional approach
resolved the conflict?

No

But it has changed the argument
from impact to management

Conflict resolution

Shared problem



What drives the conflict?

- Different world views
- History
- Increased polarisation & use of press
- Differing perceptions of impact
- Legislation

Two world views



Grouse manager -

Valuable land use – jobs, money, nature

Important cultural heritage

Importance of max harvest

Harriers threat to grouse, jobs & wildlife

Some illegal killing – but limited

Conservationists –

Biodiversity takes precedence

Importance of max harriers

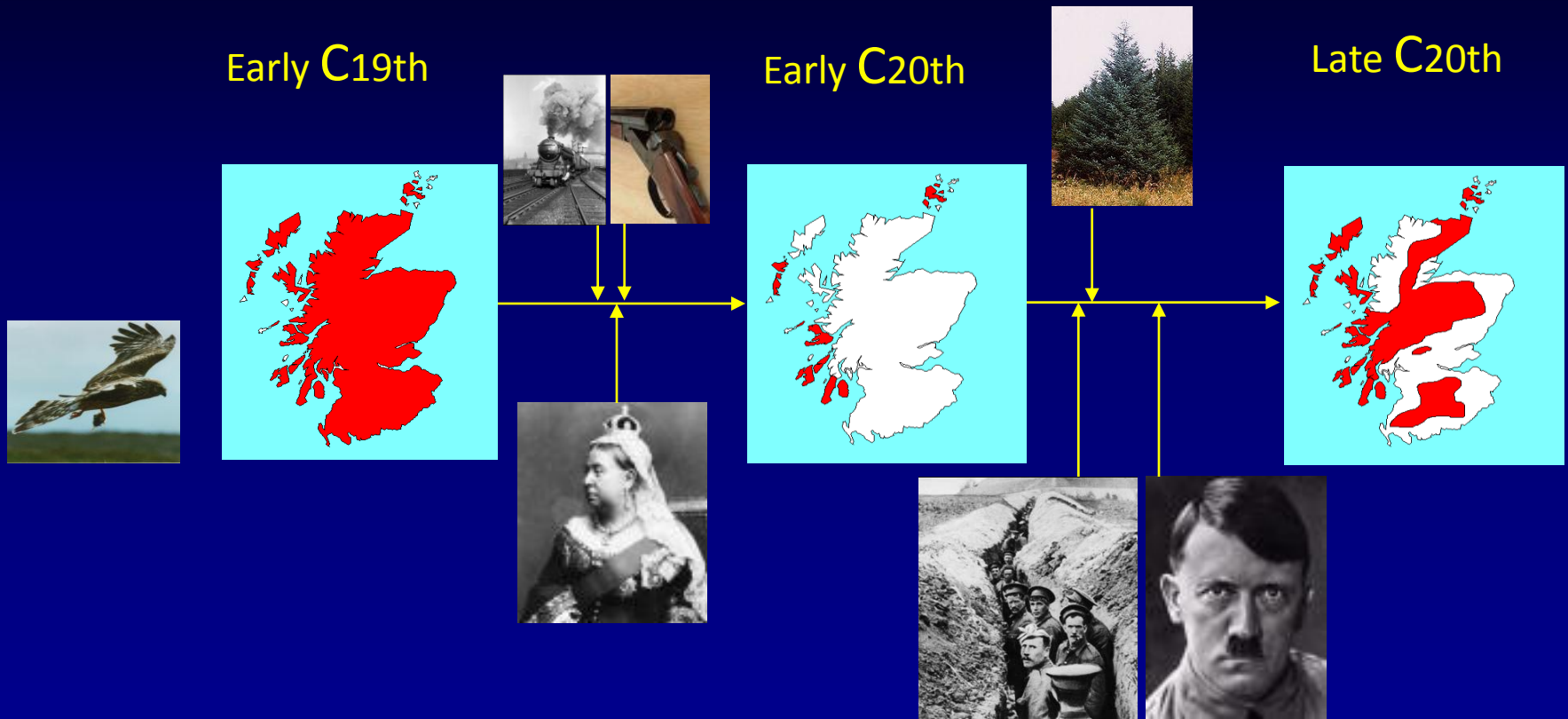
Impact of harriers limited

Illegal killing widespread

Land management for conservation better



A bit of harrier history



Source: Watson (1977) *The Hen Harrier*.
Lovegrove (2007) *Silent Fields*.

Conflicts & the press



Claws out on a silent moorland

A heated battle rages over the birds of prey threatening to destroy Britain's grouse

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Gamekeepers driving harrier to the abyss

By Michael McCarthy, Environment Editor

Wednesday, 9 May 2001

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England's rarest breeding bird of prey, the hen harrier, may have been brought to the brink of extinction this spring.

England's rarest breeding bird of prey, the hen harrier, may have been brought to the brink of extinction this spring.

English Nature, the Government's wildlife advisory body, says the large hawk has already been reduced to tiny numbers in England by gamekeepers, who are believed to kill it illegally to stop it taking red grouse chicks on grouse moors.

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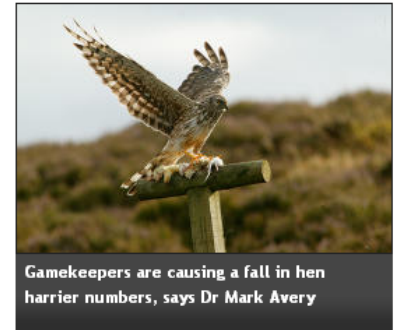
NGO: The RSPB is "completely out of order"

By Will Finch

Wednesday, 09 March 2011

Anger at Avery's claim that keepers "target" harriers, as study shows English and Welsh numbers rise

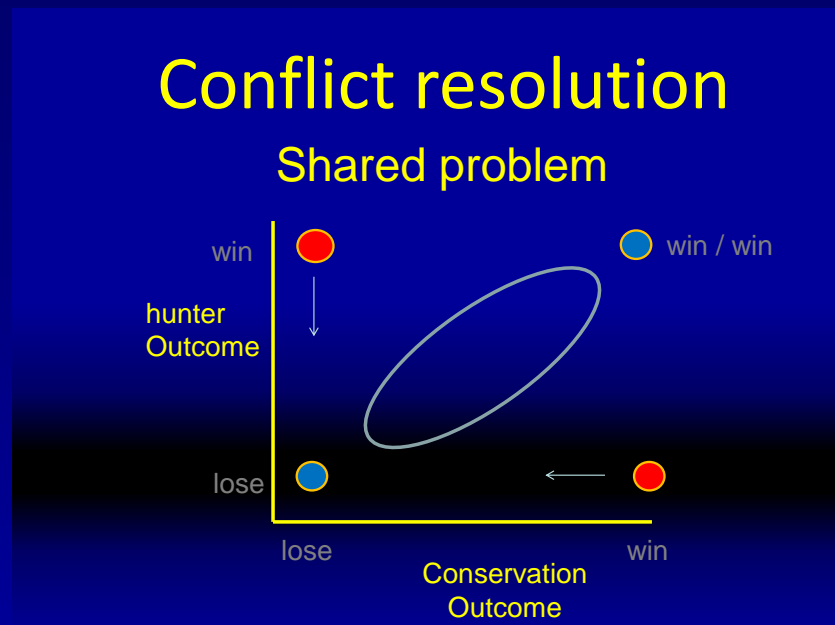
Shooting organisations have countered a public attack on keepers by the RSPB's Dr Mark Avery after the bird charity's outgoing director of conservation said he believed



Gamekeepers are causing a fall in hen harrier numbers, says Dr Mark Avery

Why so little progress in resolving such conflicts?

1. Focus on ecology
2. Little interest in finding shared solution



Working with policy
makers & stakeholders

Suggested solutions

- Ban grouse shooting
- License grouse shooting
- Increase enforcement
- Move to low intensity management
- Financial compensation
- Intra-guild predation
- Increase grouse numbers – trap & transfer or rear & release
- Alter habitat to reduce harrier numbers or predation rates
- Alter landscape to draw hunting harriers away from grouse
- Plastic heather to draw harriers away from grouse moors
- Chemical aversion therapy to stop harriers eating grouse
- Feed harriers to stop them eating grouse
- Deter harriers from settling using eagles, gas-guns
- Quota or ceiling scheme – move or kill surplus
- Re-introduce elsewhere
- Allow gamekeepers to set the harrier density

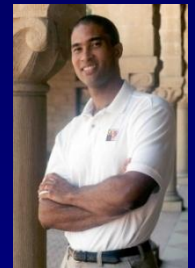
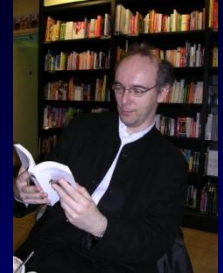
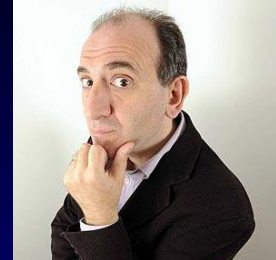
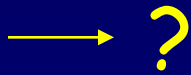
Choosing between options



Multi-criteria decision making

- List criteria – what factors do you need to consider.
- Weight criteria
- List options
- Score against weighted criteria
- Derive final score

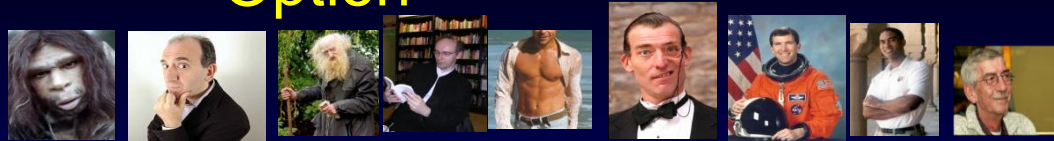
Eg finding a husband



1. Important criteria? (weight 1-10)
2. Score each (1-10) against alternatives
3. Derive final total to rank

Scoring

Option



		Weight
C	Looks	10
R	Intellect	10
I	Humour	6
T	Finance	5
E	Girth	3
R	Hair	2
I	...	
A	Total	

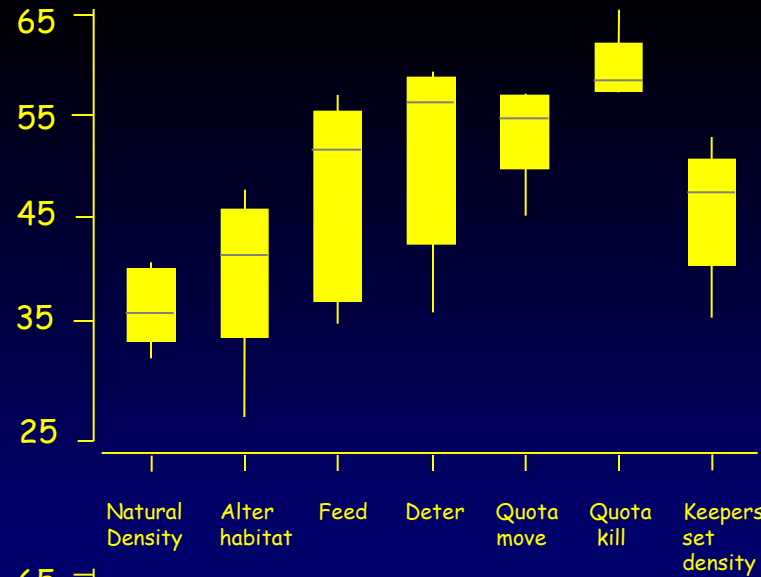
Can we use this technique to
help reduce conflict?

Suggested solutions

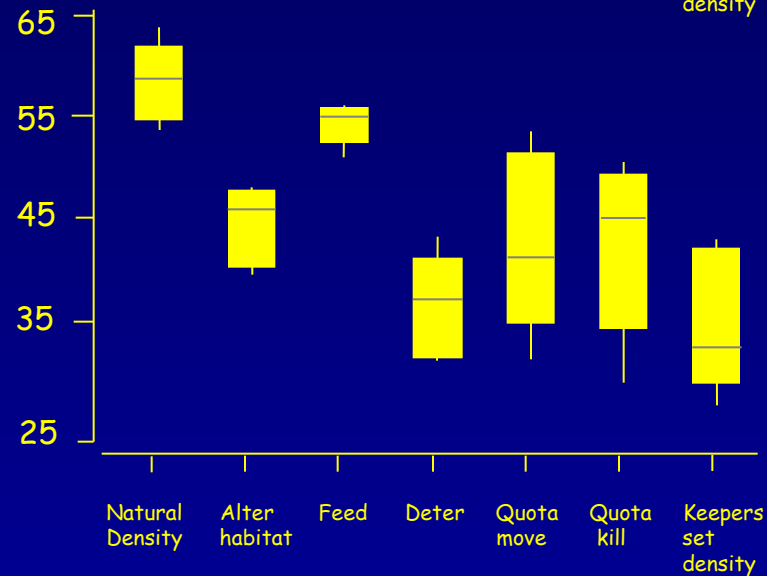
- Natural densities
- Alter habitat to reduce harrier numbers
- Feed harriers to stop them eating grouse
- Deter harriers from settling using eagles, gas-guns
- Quota or ceiling scheme – move surplus
- Quota or ceiling scheme – kill surplus
- Allow gamekeepers to set the harrier density

Comparing management alternatives

Grouse
manager
score



Raptor
conservationist
score



The model workshop:

- Altered prior positions
- Increased levels of trust between groups
- Increased understanding between groups

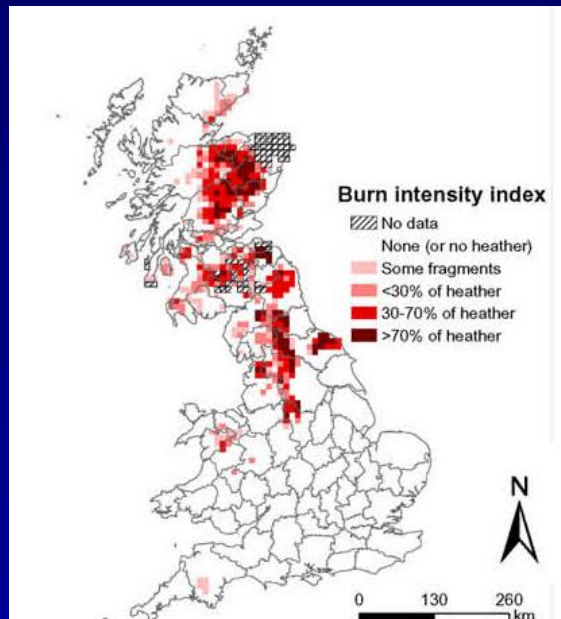
A dichotomy of approaches



Coercion – Dialogue
Top-down – Bottom-up

Which will give most robust outcomes?

Enforcement is not working



Harriers on managed grouse moors (2008)

Expected harrier nests: 300-700

Observed harrier nests: 5

Establishing stakeholder dialogue

- What do we need to think about?

Hen Harrier Dialogue

Last updated April 2010 - Documents related to this project are now available to download [here](#).

The Hen Harrier Recovery Project (HHRP) was established in 2002 by English Nature to improve the status of breeding hen harriers in England. English Nature's Council and Executive Committee have emphasised the importance of stakeholder dialogue as a central component in the new phase of the HHRP.

To find out more about this raptor species, the recovery project and the context of the Hen Harrier Dialogue, please click [here](#) for some background information.

Hen Harrier Dialogue First Main Group Meeting

English Nature, known as Natural England since October 2006, funded a meeting of interested parties in June 2006 to explore the possibility of launching a process of formal stakeholder dialogue to find some common ways forward to resolve the issue of hen harrier population growth and balance it with grouse moor managers' needs in England.

More information on projects

[Energy and Nuclear](#)[Regeneration and Development](#)[Conservation and Biodiversity](#)[↳ Hen Harrier Dialogue](#)[↳ DOCUMENTS](#)[↳ White-tailed Eagle Potential
Reintroduction](#)[↳ Hampstead Heath's Draft Management
Plan Part 1](#)[↳ Magnesian Limestone Natural Area
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Hen Harrier Dialogue 2006

Government agencies

DEFRA

SNH

JNCC

NE

RSPB

HOT

RSG

Academics

Buccleuch

CLBA

BASC

GWCT

CA

MA

CLA

NGO

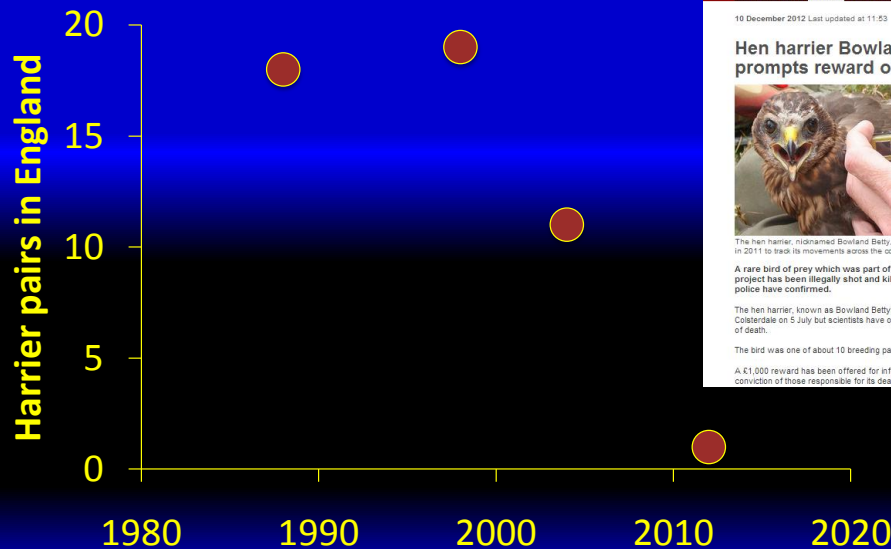
Independent
Facilitators

Grouse
Shooting
interests

Raptor
conservation
interests

Currently neither approach reducing the conflict

Has ecology helped harriers?



Hen Harrier Dialogue 2006 - 2013



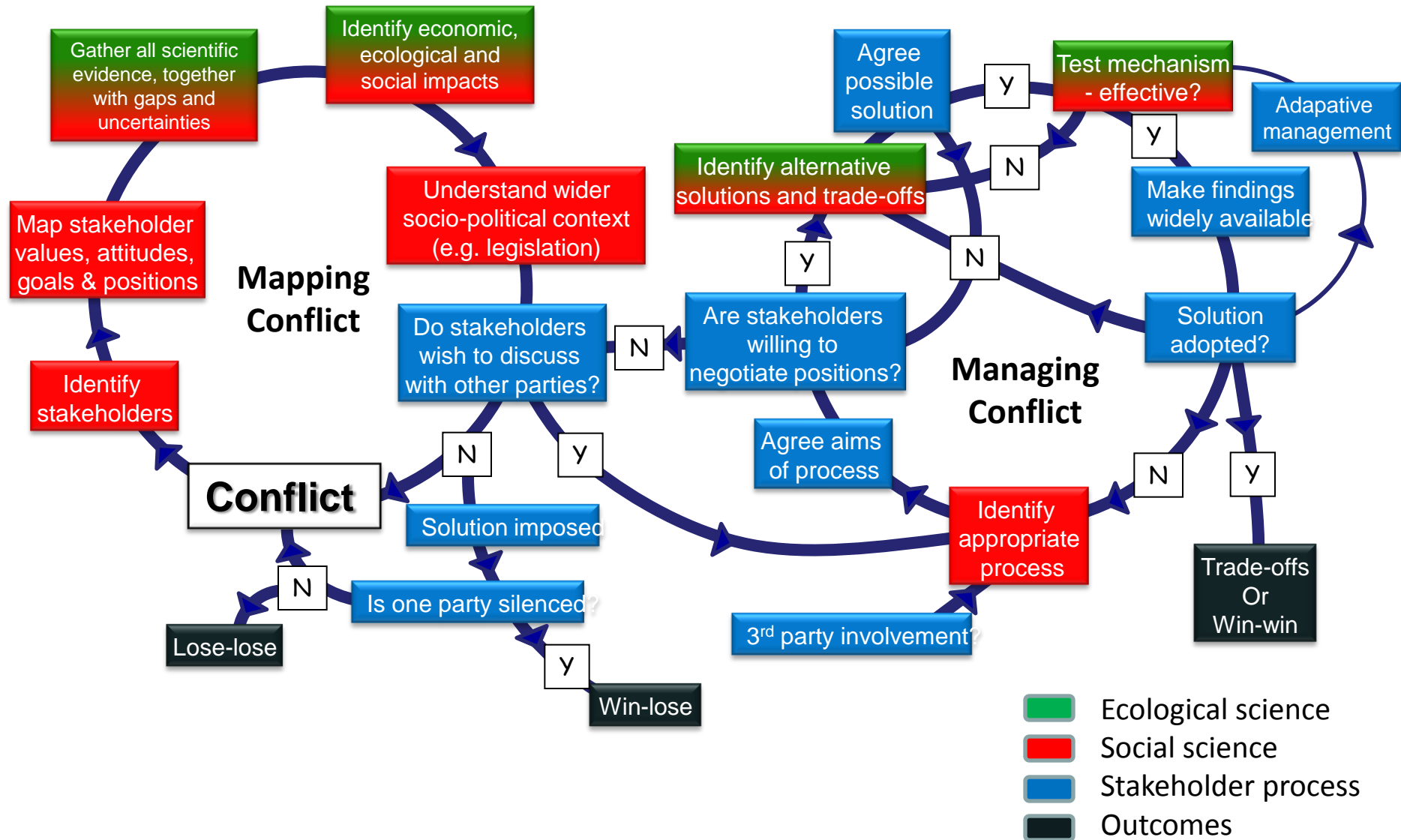
Does stakeholder engagement benefit conservation?



Does stakeholder engagement benefit conservation?

- Engagement improves relationships & understanding of science, increases trust & can reduce conflict
- Good social outcomes do not necessarily correlate with good biodiversity outcomes
- Link between stakeholder engagement and biodiversity outcomes poorly assessed

Transforming conflicts



Transforming conservation conflicts

- Recognise the underlying social & political dimensions
- Co-develop understanding and shared solutions with stakeholders
- Careful design of process
- Be honest and transparent
- Be aware of our values
- Build trust



Recognising our shared humanity

