

Linking policy needs to habitat and biodiversity science knowledge and expertise



*J. Devries, Ducks Unlimited Canada
PHJV Policy Forum – Regina, SK; May 3-4, 2016*

PHJV Science Committee

To gather and incorporate the best scientific information supporting the goals, objectives and implementation of the Prairie Habitat Joint Venture

- *Understanding the linkages between wetland and upland habitat amount and distribution and biological responses in terms of waterfowl and other bird diversity, abundance and reproductive success*
- *Ties to not only the impact of ongoing landscape change, but to the effect of PHJV conservation impact as well.*

Predicted Waterfowl Breeding Density in the Canadian PPR

Estimated Waterfowl Breeding Distribution in Prairie Canada v.2

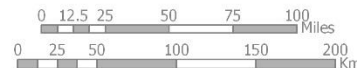


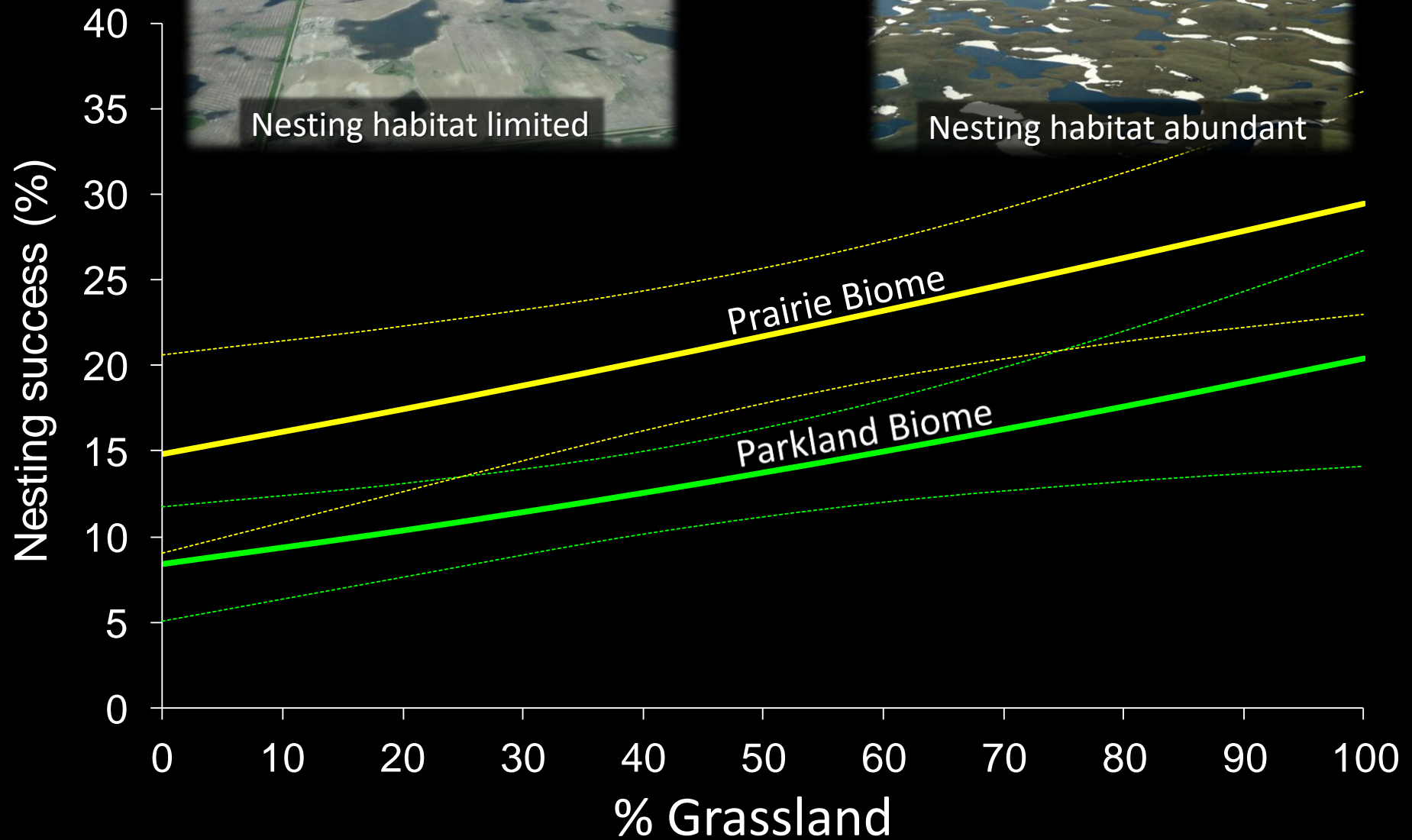
Ducks Unlimited Canada



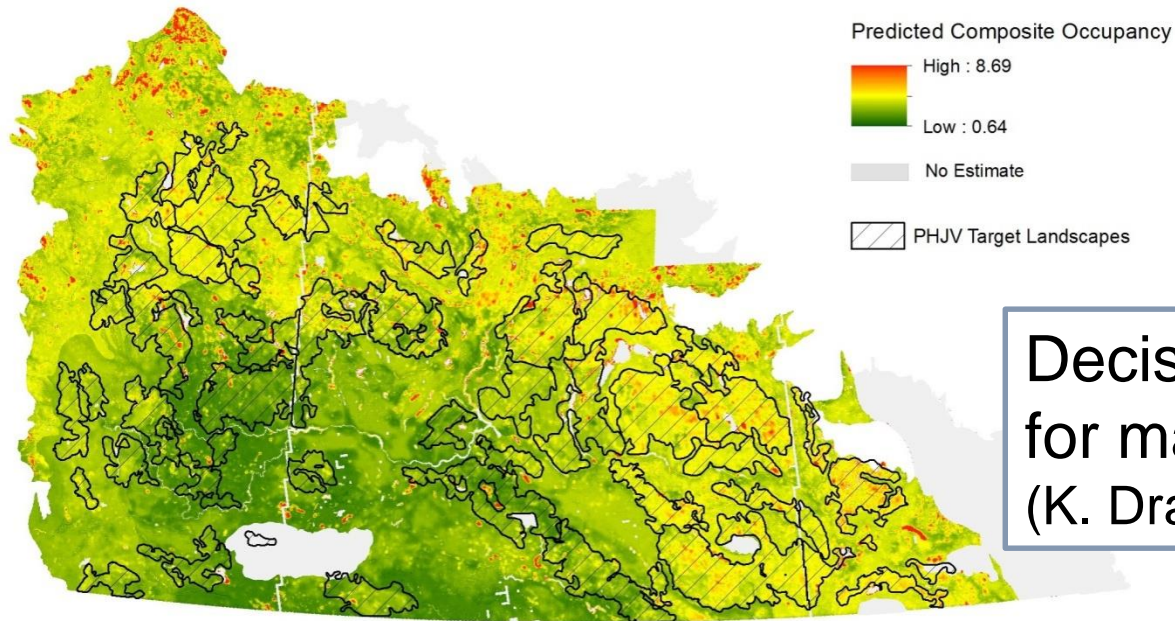
IWWR
Ducks Unlimited Canada
International Waterfowl Research

Pairs per Square Mile



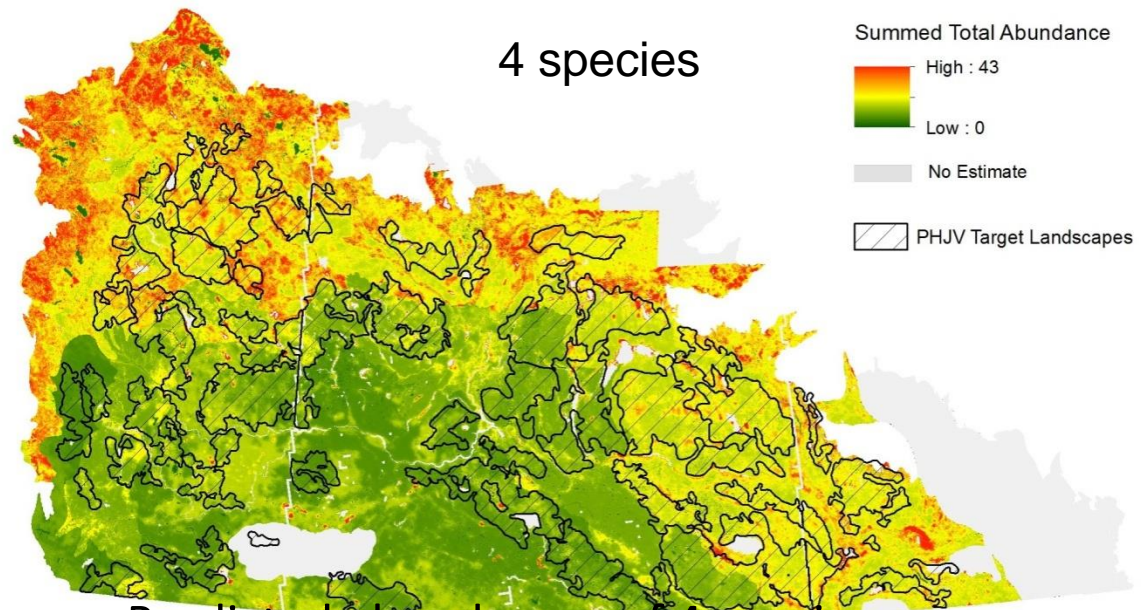


Landscape impact on waterfowl nest survival

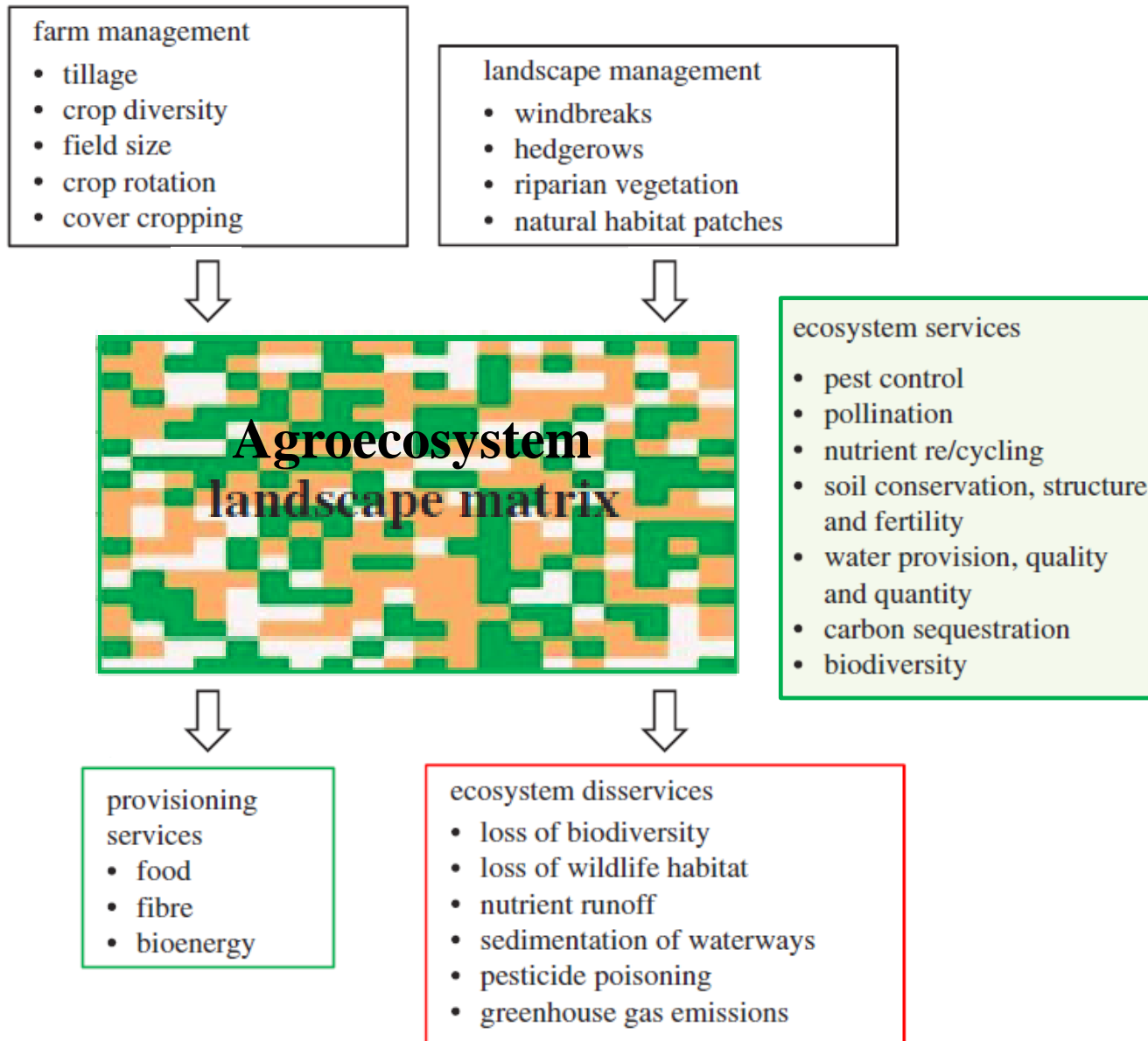


Decision support tool (DST)
for marsh bird species
(K. Drake, Bird Studies Canada)

Predicted occurrences of 10 species.



Predicted abundances of 4 species.



Modified from: Ecosystem services and agriculture: tradeoffs and synergies, Power (2010)



Recognizing the broader biodiversity values of wetlands and uplands...

- Requires an understanding of the linkages between prairie wetland and upland habitats and the species that depend on them (birds, amphibians, pollinators, etc.)



Habitats benefitting waterfowl, benefit multiple other species...

Landscape change

Biodiversity change

- Birds and mammals*
- Amphibians/reptiles*
- Terrestrial and aquatic arthropods*
- Vegetation*
- Soil macro/micro biota*

Recap of Challenges and Needs – Wetlands and Biodiversity

- “Ecological health assessments”, “EGS”, “Wetland Value”, “Wetland Benefits”, “Ecosystem Health”, “Fish or Wildlife Habitat”, “Habitat Loss” – what do we mean, specifically?
- Link to farm economics – e.g., pollinating and beneficial insects
- Level of biodiversity information informing wetland assessments?
- Changing agricultural practices – nutrients/pesticide impacts on wetland functions
- Wetland Inventory...!

