From: Juliusson, Lara
To: Jason Tack
Cc: Doherty, Kevin; Woodbridge, Brian; Todd Lickfett; Brad Fedy
Subject: Re: Homework assignment
Date: Tuesday, May 13, 2014 5:21:51 PM

All -

I am looking more in-depth at the various moving window sizes and moving window types used in the literature for sage-grouse resource selection, including, how and at what scale was the source data derived, were multiple scales evaluated, what order of selection was being studied, and what were the study results (important covariates). I hope to have a compiled document that could provide some insights into the appropriate analysis scales for at least the sage-grouse modeling work.

Lara

Lara Juliusson, Geographer/Ecologist
Sage-grouse Energy Team
U.S. Fish and Wildlife Service,
Region 6, Lakewood, CO
Lara_Juliusson@fws.gov
303-236-9876

On Tue, May 13, 2014 at 1:22 PM, Juliusson, Lara <lara_juliusson@fws.gov> wrote:

> Interesting. I've got a couple of meetings coming up, but I'll weigh in before the end of the day with my thoughts on moving window radii distances.
>
> Lara Juliusson, Geographer/Ecologist
> Sage-grouse Energy Team
> U.S. Fish and Wildlife Service,
> Region 6, Lakewood, CO
> Lara_Juliusson@fws.gov
> 303-236-9876
>
> On Tue, May 13, 2014 at 1:15 PM, Jason Tack <jasontack@gmail.com> wrote:
>
>> Sorry for the confusion the buffers are 30-990m moving windows (circular). So, a 30m buffer would encompass 5 - 30m pixels (150m^2); 60m moving window would encompass 13 pixels (390m^2); 90m would encompass 25 cells (750m^2); etc. etc.
>>
>> -Elmer Keith on criticism of using a .475 for mule deer- "are you worried you're gonna kill it too dead?"
>>
>> On Tue, May 13, 2014 at 12:59 PM, Doherty, Kevin <kevin_doherty@fws.gov> wrote:
>>
>>> Tack,
>>>
>>> To make sure I am understanding this, you used a 90 to 120 meter buffer? Which would

equate to a cell size of 210m^2 (90 + 90 + 30) meters or 270m^2 (120 + 120 + 30) meters as a minimum mapping unit. Then within each cell (either 210 or 270 m^2) we would have the mean number of cliff cells so it would equate to a moving window. If we asked Jack O'conner which was his beloved I am pretty sure he would go with .270, o-wait I digress we are not talking about calibers!

Cheers
Kevin

On Tue, May 13, 2014 at 12:47 PM, Jason Tack <jasontack@gmail.com> wrote:

> Hi all,
>
> I did a quick look into model sensitivity across scales using our most predictive variable for the wyoming basin.
>
> Basically I:
>
> 1) ran moving windows from 30-990m at 30 increments across the Wyoming Basin (32 rasters took ~ 5 hours of processing time on crappy laptop).
>
> 2) Ran use-available models using each cliff variable univariately
>
> 3) and summarized coefficient estimate and model likelihood (attached figure in document).
>
> The take home message is that for cliffs, 90-120m windows are ideal, and going out to 1km reduces explanatory power by ~15%. Also cliffs summarized near 1km is only moderately correlated (r=.6) with the most predictive scale.
>
> Cheers,
> tack

--

Kevin Doherty, PhD

Spatial Ecologist

United States Fish & Wildlife Service

(303) 921-0524
kevin_doherty@fws.gov