Yes, makes sense.

Thanks.

Carrie

**From:** Holt, Kendra <[Kendra.Holt@dfo-mpo.gc.ca](mailto:Kendra.Holt@dfo-mpo.gc.ca)>   
**Sent:** Monday, January 17, 2022 9:14 AM  
**To:** Holt, Carrie <[Carrie.Holt@dfo-mpo.gc.ca](mailto:Carrie.Holt@dfo-mpo.gc.ca)>  
**Subject:** RE: Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

I don’t think we need to add simulation of depensation at this point given that we are demonstrating an approach, not setting LRPs for our case study stocks (unless you want to for the Chinook case study).  I think we can emphasize that SR models used in forward projections should be based on plausible scenarios for each CU, and should be determined on a case by case basis.  While we did not explicitly consider depensation in any of our case studies, we did look at alternative formulations of SR models that varied in assumptions about productivity and prior information on population capacity through both sensitivity analyses and model averaging.  Future applications of projected LRPs could easily be adapted to account for depensation prior to application; the R package format of samSim easily lends itself to these types of adaptations.

I can add some of this to the coho chapter discussion since depensation models were previously used for coho and we actually chose not to apply them here, so this would be a natural tie-in.  We could also mention it in the conclusions of the case study paper and in the guidelines paper.

What do you think?

K.

**From:** Holt, Carrie <[Carrie.Holt@dfo-mpo.gc.ca](mailto:Carrie.Holt@dfo-mpo.gc.ca)>   
**Sent:** Monday, January 17, 2022 7:57 AM  
**To:** Holt, Kendra <[Kendra.Holt@dfo-mpo.gc.ca](mailto:Kendra.Holt@dfo-mpo.gc.ca)>  
**Subject:** RE: Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

I guess we could mention that the results with depensation would likely be similar to those with lower productivity, and mention it as future work (if we haven’t already).

**From:** Holt, Carrie   
**Sent:** Monday, January 17, 2022 7:49 AM  
**To:** Holt, Kendra <[Kendra.Holt@dfo-mpo.gc.ca](mailto:Kendra.Holt@dfo-mpo.gc.ca)>  
**Subject:** FW: Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

HI Kendra

I’m not sure what to do with this.  Add simulation of depensation? (this isn’t the first time he’s mentioned it).

I do show sensitivity analysis with lower productivity.

Carrie

**From:** Michael Staley <[mstaley@mstaley.com](mailto:mstaley@mstaley.com)>   
**Sent:** Monday, January 17, 2022 7:24 AM  
**To:** Holt, Carrie <[Carrie.Holt@dfo-mpo.gc.ca](mailto:Carrie.Holt@dfo-mpo.gc.ca)>  
**Subject:** RE: Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

Thanks for the opportunity to read the documents.

The amount of time to fully interpret and consider these documents exceeds the amount of time and resources I  have available.

I am sure I would and perhaps will have more comments as we get to the CSAS meeting but I am still concerned about the underlying models used for the simulation analyses. You do included a section on time varying productivity. For many of the salmon populations there appears to be a decline in productivity at the same time as a decline in abundance. This can be simulated with declining productivity but it can also reflect a more complex model perhaps involving depensation at lower abundance. The Ricker based SR models assume increasing productivity with decrease abundance. If that is not what we are observing then perhaps this is a case where “all models are wrong but some are useful.”

I look forward to continuing to follow your work on this. I will be attending the CSAS session but have no idea what the new fiscal will bring for a workplan for me.

Thanks

Michael Staley (S’élíyáméxw)

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**From:** Holt, Carrie <[Carrie.Holt@dfo-mpo.gc.ca](mailto:Carrie.Holt@dfo-mpo.gc.ca)>   
**Sent:** January 11, 2022 8:40 AM  
**To:** Huang, Ann-Marie <[Ann-Marie.Huang@dfo-mpo.gc.ca](mailto:Ann-Marie.Huang@dfo-mpo.gc.ca)>; Velez-Espino, Antonio <[Antonio.Velez-Espino@dfo-mpo.gc.ca](mailto:Antonio.Velez-Espino@dfo-mpo.gc.ca)>; Foos, Aaron <[Aaron.Foos@dfo-mpo.gc.ca](mailto:Aaron.Foos@dfo-mpo.gc.ca)>; Dobson, Diana <[Diana.Dobson@dfo-mpo.gc.ca](mailto:Diana.Dobson@dfo-mpo.gc.ca)>; Carr-Harris, Charmaine <[Charmaine.Carr-Harris@dfo-mpo.gc.ca](mailto:Charmaine.Carr-Harris@dfo-mpo.gc.ca)>; Davies, Shaun <[Shaun.Davies@dfo-mpo.gc.ca](mailto:Shaun.Davies@dfo-mpo.gc.ca)>; [brooke.davis@dfo-mpo.gc.ca](mailto:brooke.davis@dfo-mpo.gc.ca); Luedke, Wilf <[Wilf.Luedke@dfo-mpo.gc.ca](mailto:Wilf.Luedke@dfo-mpo.gc.ca)>; Parken, Chuck <[Chuck.Parken@dfo-mpo.gc.ca](mailto:Chuck.Parken@dfo-mpo.gc.ca)>; Grant, Sue <[Sue.Grant@dfo-mpo.gc.ca](mailto:Sue.Grant@dfo-mpo.gc.ca)>; Cox-Rogers, Steven <[Steven.CoxRogers@dfo-mpo.gc.ca](mailto:Steven.CoxRogers@dfo-mpo.gc.ca)>; Folkes, Michael <[Michael.Folkes@dfo-mpo.gc.ca](mailto:Michael.Folkes@dfo-mpo.gc.ca)>; Arbeider, Michael <[Michael.Arbeider@dfo-mpo.gc.ca](mailto:Michael.Arbeider@dfo-mpo.gc.ca)>; Michael Staley <[mstaley@mstaley.com](mailto:mstaley@mstaley.com)>; Connors, Brendan <[Brendan.Connors@dfo-mpo.gc.ca](mailto:Brendan.Connors@dfo-mpo.gc.ca)>; [pnicklin@telus.net](mailto:pnicklin@telus.net); Whitmore, Ryan <[Ryan.Whitmore@dfo-mpo.gc.ca](mailto:Ryan.Whitmore@dfo-mpo.gc.ca)>; Brown, Nicholas <[Nicholas.Brown@dfo-mpo.gc.ca](mailto:Nicholas.Brown@dfo-mpo.gc.ca)>; McHugh, Diana <[Diana.McHugh@dfo-mpo.gc.ca](mailto:Diana.McHugh@dfo-mpo.gc.ca)>; Bokvist, Jessy <[Jessy.Bokvist@dfo-mpo.gc.ca](mailto:Jessy.Bokvist@dfo-mpo.gc.ca)>; [Sabrina.Crowley@nuuchahnulth.org](mailto:Sabrina.Crowley@nuuchahnulth.org); [candace@haoom.ca](mailto:candace@haoom.ca); Nicole Frederickson <[nfrederickson.imawg@gmail.com](mailto:nfrederickson.imawg@gmail.com)>; Kelsey Campbell <[kelseycampbell@shawcable.com](mailto:kelseycampbell@shawcable.com)>; Van Will, Pieter <[Pieter.VanWill@dfo-mpo.gc.ca](mailto:Pieter.VanWill@dfo-mpo.gc.ca)>  
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**Subject:** RE: Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

A gentle reminder for those who have not yet reviewed the LRP Salmon WPs already that we are looking for **feedback by this Friday, Jan. 14**, so that we can incorporate those comments into the papers prior submission to CSAS at the end of the month.

Thanks to those of you have provided feedback; much appreciated!

Sincerely

Carrie, Kendra, Luke and Catarina

**From:** Holt, Carrie   
**Sent:** Friday, December 17, 2021 2:42 PM  
**To:** Huang, Ann-Marie <[Ann-Marie.Huang@dfo-mpo.gc.ca](mailto:Ann-Marie.Huang@dfo-mpo.gc.ca)>; Velez-Espino, Antonio <[Antonio.Velez-Espino@dfo-mpo.gc.ca](mailto:Antonio.Velez-Espino@dfo-mpo.gc.ca)>; Foos, Aaron <[Aaron.Foos@dfo-mpo.gc.ca](mailto:Aaron.Foos@dfo-mpo.gc.ca)>; Dobson, Diana <[Diana.Dobson@dfo-mpo.gc.ca](mailto:Diana.Dobson@dfo-mpo.gc.ca)>; Carr-Harris, Charmaine <[Charmaine.Carr-Harris@dfo-mpo.gc.ca](mailto:Charmaine.Carr-Harris@dfo-mpo.gc.ca)>; Davies, Shaun <[Shaun.Davies@dfo-mpo.gc.ca](mailto:Shaun.Davies@dfo-mpo.gc.ca)>; Davis, Brooke <[Brooke.Davis@dfo-mpo.gc.ca](mailto:Brooke.Davis@dfo-mpo.gc.ca)>; Luedke, Wilf <[Wilf.Luedke@dfo-mpo.gc.ca](mailto:Wilf.Luedke@dfo-mpo.gc.ca)>; Parken, Chuck <[Chuck.Parken@dfo-mpo.gc.ca](mailto:Chuck.Parken@dfo-mpo.gc.ca)>; Grant, Sue <[Sue.Grant@dfo-mpo.gc.ca](mailto:Sue.Grant@dfo-mpo.gc.ca)>; Cox-Rogers, Steven <[Steven.CoxRogers@dfo-mpo.gc.ca](mailto:Steven.CoxRogers@dfo-mpo.gc.ca)>; Folkes, Michael <[Michael.Folkes@dfo-mpo.gc.ca](mailto:Michael.Folkes@dfo-mpo.gc.ca)>; Arbeider, Michael <[Michael.Arbeider@dfo-mpo.gc.ca](mailto:Michael.Arbeider@dfo-mpo.gc.ca)>; 'Michael Staley' <[mstaley@mstaley.com](mailto:mstaley@mstaley.com)>; Connors, Brendan <[Brendan.Connors@dfo-mpo.gc.ca](mailto:Brendan.Connors@dfo-mpo.gc.ca)>; 'pnicklin@telus.net' <[pnicklin@telus.net](mailto:pnicklin@telus.net)>; Whitmore, Ryan <[Ryan.Whitmore@dfo-mpo.gc.ca](mailto:Ryan.Whitmore@dfo-mpo.gc.ca)>; Brown, Nicholas <[Nicholas.Brown@dfo-mpo.gc.ca](mailto:Nicholas.Brown@dfo-mpo.gc.ca)>; McHugh, Diana <[Diana.McHugh@dfo-mpo.gc.ca](mailto:Diana.McHugh@dfo-mpo.gc.ca)>; Bokvist, Jessy <[Jessy.Bokvist@dfo-mpo.gc.ca](mailto:Jessy.Bokvist@dfo-mpo.gc.ca)>; 'Sabrina.Crowley@nuuchahnulth.org' <[Sabrina.Crowley@nuuchahnulth.org](mailto:Sabrina.Crowley@nuuchahnulth.org)>; 'candace@haoom.ca' <[candace@haoom.ca](mailto:candace@haoom.ca)>; 'Nicole Frederickson' <[nfrederickson.imawg@gmail.com](mailto:nfrederickson.imawg@gmail.com)>; 'Kelsey Campbell' <[kelseycampbell@shawcable.com](mailto:kelseycampbell@shawcable.com)>; Van Will, Pieter <[Pieter.VanWill@dfo-mpo.gc.ca](mailto:Pieter.VanWill@dfo-mpo.gc.ca)>  
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**Subject:** Draft Working Papers: Salmon LRPs (reviews by Jan 14 please)

Dear TWG for Salmon LRPs,

Thanks for your thoughtful feedback on preliminary drafts of the case study paper. Attached are the complete drafts of both Working Papers, in both pdf and Word versions.

1. Guidelines for Defining Limit Reference Points for Pacific Salmon Stock Management Units. LRPGuidelines\_17Dec2021.pdf, LRPGuidelines\_17Dec2021.docx
2. Case Study Applications of LRP Estimation Methods to Pacific Salmon Stock Management Units. LRPCaseStudies\_17Dec2021.pdf, LRPCaseStudies\_17Dec2021.docx

If possible, please return comments by **Friday January 14**. If are not able to review in that time frame, please let us know and we can accommodate. If you are listed as a co-author, we do need your review to incorporate your feedback before submitting to CSAS early February. We have listed co-authors as those participants who contributed to the data or analysis for case studies, provided full reviews of drafts, and/or contributed significantly to the guidelines. If you are missing, but would like to be included, please let us know.

Feel free to provide comments in a separate file referring to line numbers in the PDF, or directly in the Word Document with track changes. Note, the formatting for the Word document is not perfect, and some Tables and Figures are not correctly rendered. Please refer to the PDF if anything is confusing.

Also attached is the Terms of Reference.

Let us know if you have any questions, and have a wonderful holiday.

Carrie, Kendra, Luke, and Catarina

Carrie Holt

(she/her)

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*I acknowledge that the land on which I work is the traditional territory of the Snuneymuxw First Nation*