

QUESTIONS & ANSWERS

* Transcribed

Climate Change and Autumn Low-Flows in the Skeena Watershed

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Geomorphic Earth & Environmental

Question: (22:50) Can you make any predictions with any certainty on the future with regard to El Nino and La Nina events?

Answer: (23:19, Anderson) I'd say a degree of certainty on the response of the river to these El Nino and La Nina events is quite consistent. It was three different metrics that we saw today in this presentation, which agreed with some of the findings that Jack is finding, as to predicting how many El Nino events will come down the pipe versus La Ninas. That's certainly another can of fish. I think all we really have available to us right now is global and regional climate models to do that and the problem becomes scale. They're very coarse scaled and it makes it difficult to tell the difference between the Kitwanga and Kispiox watersheds in terms of which one would be more appropriate for independent power in any particular direction.

Comment: (24:08, Brian Riddell) It's actually a question that's coming up quite a few times in work that we're doing around the North Pacific, and the climate models right now, from the intergovernmental panel, actually don't predict these very well, but they think it's because really you are talking about time scales on different levels. You've got large-scale climate change going on over a long period of time and the events that Jeff is talking about here—I think he described them as annual events—they're more related to weather events. They're all related to climate cells, weather cells, etc., but the time scales are different and the global models don't predict them very well right now. It's something that they're working on.

Question: (24:50) Would it be possible to take this one step further and, say, look at the productivity of these watersheds in terms of what these autumn low flows mean to productivity in terms of salmon and see if there's any correlation there?

Answer: (25:05, Anderson) I think the work that Jack's group is doing is remotely sensing productivity by different methods i.e. using several different metrics to get at stream productivity by climate change. Certainly, what I think is an opportunity with this work, Greg, is to look more into sea surface temperatures and try and use sea surface temperatures in the Northeast Pacific as a predictor, but that is limited in scale. You can't go more than a couple of years or a year and then the next step is global climate models. It would take you a hundred years, but they're lacking that local detail that you get from a sea surface temperature connection.