

Cumulative Effects model project overview

FUNDING: DFO (Nature Legacy), BCSRIF (*Developing a Cumulative Effects Modelling Framework for the Recovery of Salmonid Populations*)

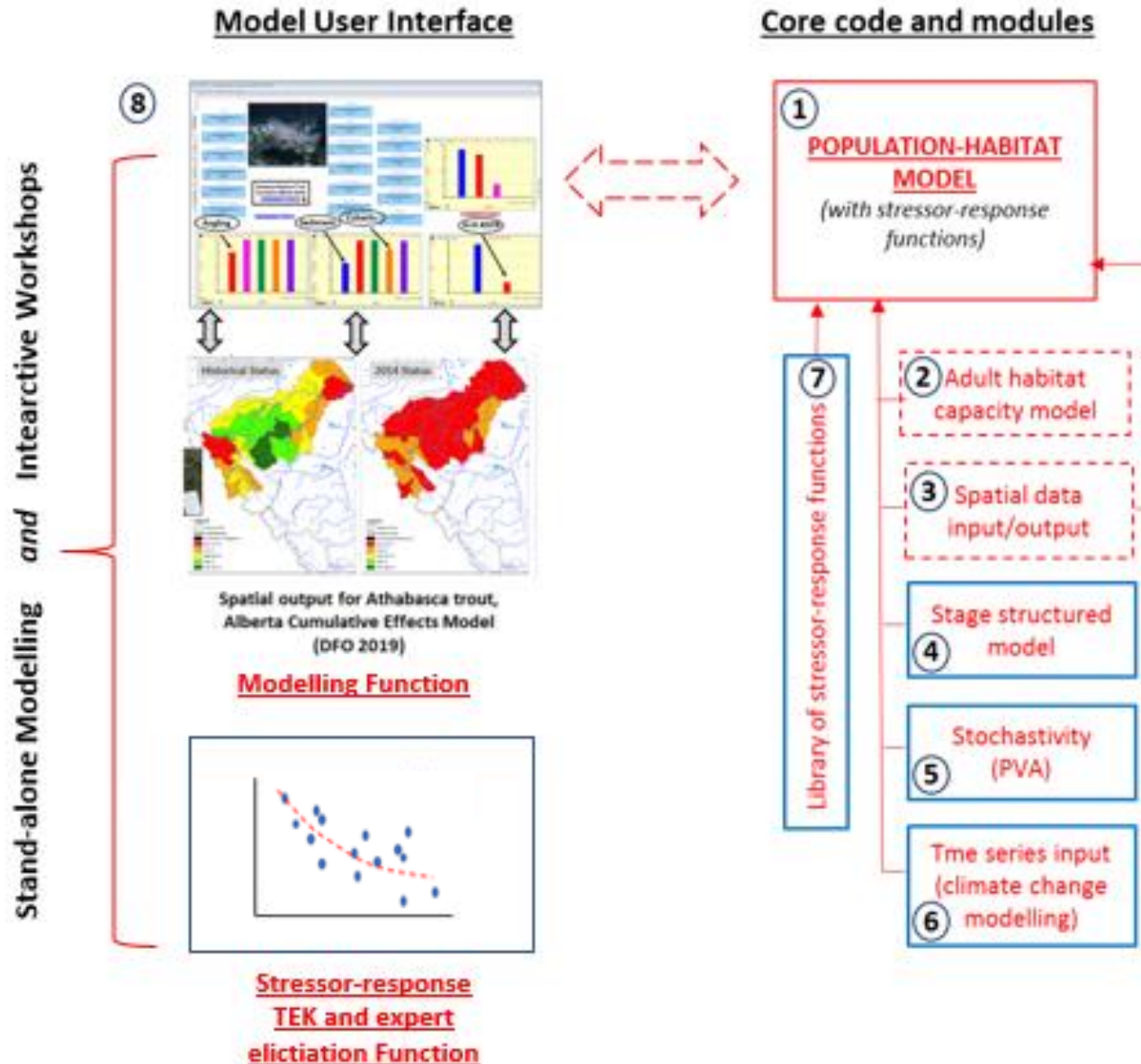
PEOPLE INVOLVED:

- Eva Enders (DFO Winnipeg)
- Jordan Rosenfeld (B.C. Ministry of Environment)
- Jon Moore, Kyle Wilson, Marta Ulaski, Brett Van Poorten, (SFU)
- Mike Sullivan, Andy Paul, Laura MacPherson (Alberta Env. and Parks)
- Marc Porter, Matt Bayly, Alejandra Urcelay (ESSA)
- Lauren Jarvis, Pedro Gonzalez-Espinoza (2 Post-Docs to be hired)

PROJECT GOAL:

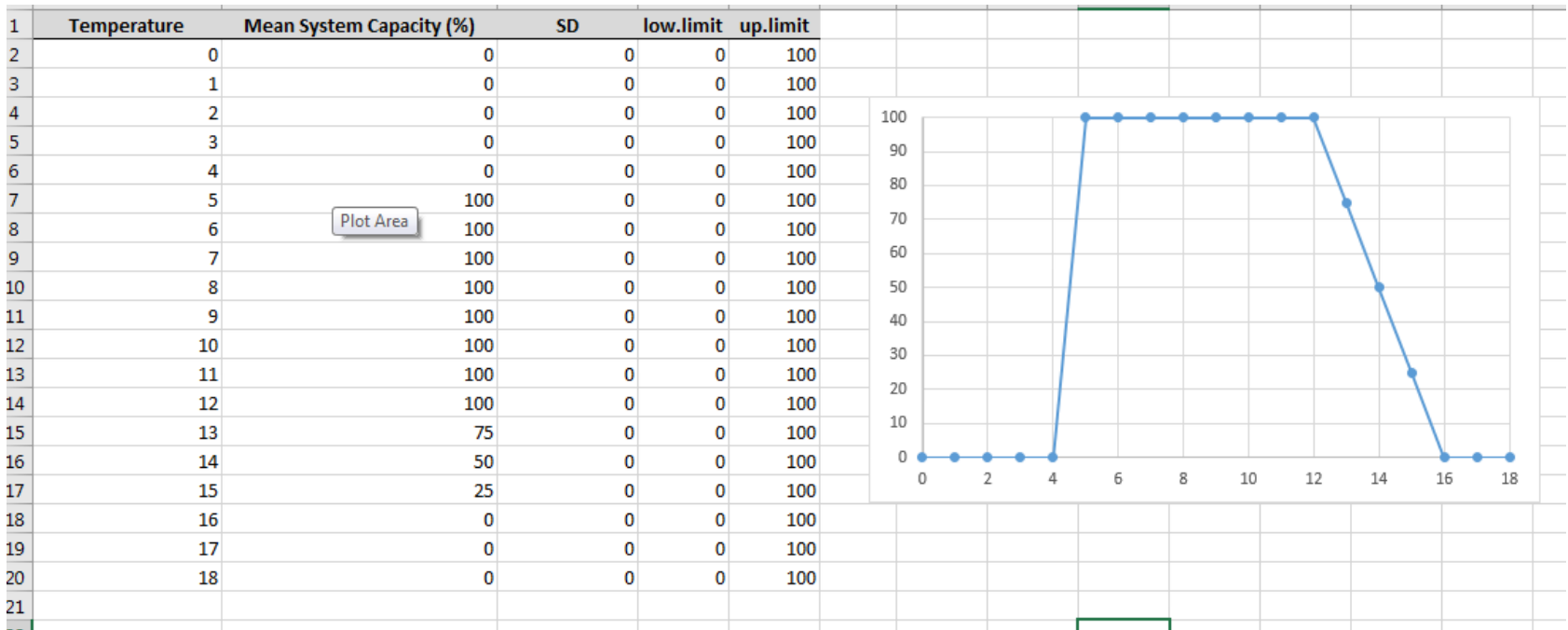
To develop a user-friendly Cumulative Effects modelling platform for assessing recovery/management scenarios, based on stressor-response functions for taxa-specific threats

Based on the Alberta Cumulative Effects Model



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	HUC_10	HUC	HUC	HUC	HUC	NAME	Stressor	Sub_type	Mean	SD	Distributi	Low_Lin	Up_Lin	Comments
2	1701010201	17010102	170101	1701	17	LICK CREEK	Temperature	Air_temp	10.24200001	0	normal	N/A	N/A	
3	1701010201	17010102	170101	1701	17	LICK CREEK	Temperature	N/A	6.174670012	0	normal	0	18	Modelled from regression
4	1701010201	17010102	170101	1701	17	LICK CREEK	Nat_lim_other	Hist_FSI	0	0	normal	0	0	No native rainbows, Above
5	1701010201	17010102	170101	1701	17	LICK CREEK	Mortality	Nat_mort	0.35	0	normal	0	1	all mortality goes to 0 -1
6	1701010201	17010102	170101	1701	17	LICK CREEK	Mortality	Angling	0	0	normal	0	1	all mortality goes to 0 -1
7	1701010201	17010102	170101	1701	17	LICK CREEK	Mortality	Indigenous	0	0	normal	0	1	all mortality goes to 0 -1
8	1701010201	17010102	170101	1701	17	LICK CREEK	Mortality	Entrainment	0	0	normal	0	1	
9	1701010201	17010102	170101	1701	17	LICK CREEK	Mortality	Research	0	0	normal	0	1	
10	1701010201	17010102	170101	1701	17	LICK CREEK	Fragmentation	N/A	0	0	normal	0	0.31875	
11	1701010201	17010102	170101	1701	17	LICK CREEK	Barrier_dams	N/A	0	0	normal	0	5	
12	1701010201	17010102	170101	1701	17	LICK CREEK	BKTR	N/A	50	0	normal	0	100	
13	1701010201	17010102	170101	1701	17	LICK CREEK	NN_RNTR	N/A	50	0	normal	0	100	
14	1701010201	17010102	170101	1701	17	LICK CREEK	Phosphorus	N/A	0.002670467	0	normal	0.01	978	
15	1701010201	17010102	170101	1701	17	LICK CREEK	Sediment	N/A	1	0	normal	1	10.8	
16	1701010201	17010102	170101	1701	17	LICK CREEK	Feb_flow	N/A	100	0	normal	100	0	
17	1701010201	17010102	170101	1701	17	LICK CREEK	Aug_flow	N/A	100	0	normal	100	0	
18	1701010201	17010102	170101	1701	17	LICK CREEK	Flow_regime	Footprint_per	0.083052661	0	normal	0	100	
19	1701010201	17010102	170101	1701	17	LICK CREEK	Selenium	N/A	0	0	normal	0	31	
20	1701010201	17010102	170101	1701	17	LICK CREEK	WD	N/A	0	0	normal	0	5	
21	1701010201	17010102	170101	1701	17	LICK CREEK	Habitat_loss	N/A	0	0	normal	0	100	

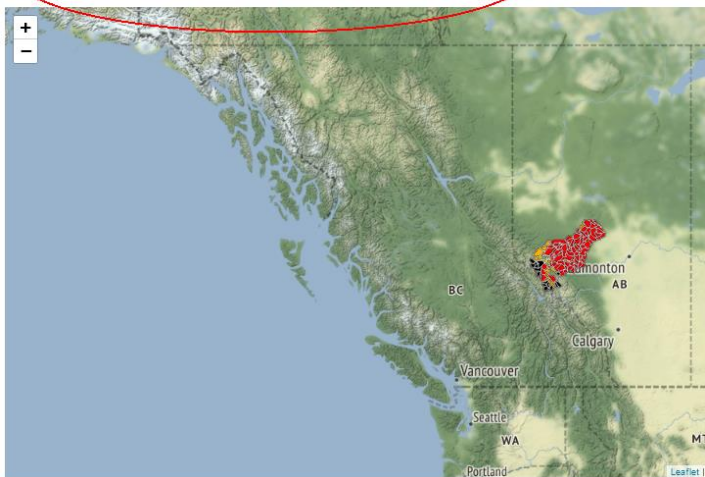
Stressor *magnitude* (state) input file



Stressor *response* input file

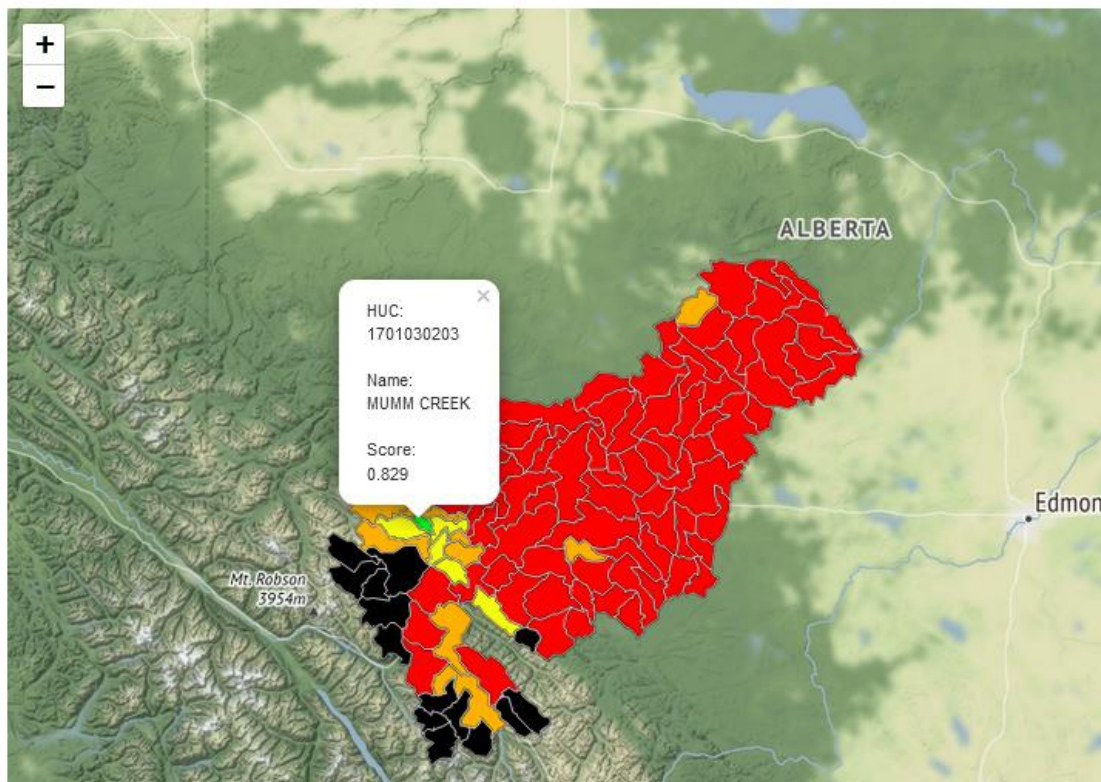
XXXX Cumulative Effects Model

Map CE HUC Stressor Levels Stress-Response Relations Data Input/Output



XXXX Cumulative Effects Model

Map CE HUC Stressor Levels Stress-Response Relations Data Input/Output



Purpose of BCSRIF funding: Develop the model with pilot application to Nicola River salmon/steelhead stocks

