

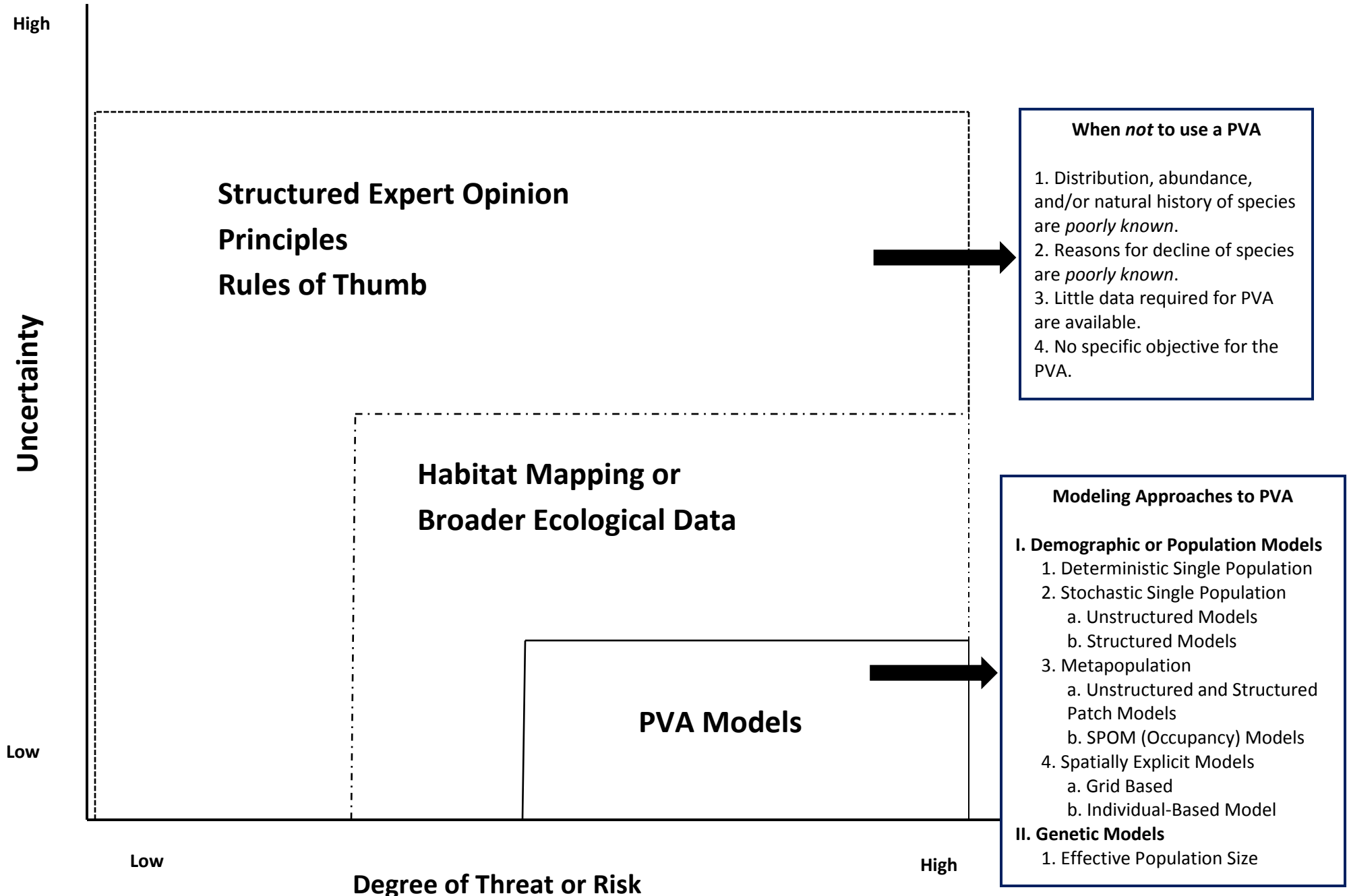
From: [Grizzle, Betty](#)
To: [Shoemaker, Justin](#); [John Guinotte](#)
Subject: Summary diagram/table from PVA class
Date: Friday, June 16, 2017 1:16:00 PM
Attachments: [When to use PVA summary diagram.pdf](#)
[Requirements of PVA models.pdf](#)

Thought this might be helpful - see attached.

--

Betty J. Grizzle, D.Env.
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
2177 Salk Ave, Suite 250
Carlsbad, CA 92008
760-431-9440, ext. 215
760-431-5901 fax

Uncertainty, Threat, and Assessment Approach



Requirements of PVA Models

(Beissinger & Westphal 1998. Journal of

Wildlife Management, 62:821-841)

<u>Data type</u>	<u>Data needs</u>	<u>DSP</u>	<u>SSP</u>	<u>Metapop</u>	<u>Space</u>	<u>Explicitly</u>
<i>Demographic</i>	Age or stage structure	X	X	X	X	X
	Age of first breeding	X	X	X	X	X
	Mean fecundity for each age or stage	X	X	P	P	P
	Mean survival for each age or stage	X	X	P	P	P
	Variance in fecundity		X	X	X	X
	Variance in survival		X	X	X	X
	Carrying capacity and density dependence		X	P	P	P
	Variance in carrying capacity		X	X	X	X
	Frequency and magnitude of catastrophes		X	X	X	X
	Covariance in demographic rates		X	X	X	X
<i>Landscape</i>	Spatial covariance in rates			P	P	P
	Patch types			X	X	X
	Distance between patches			X	X	X
	Area of patches			X	X	X
	Location of patches					
	Transitions among patch types					
	Matrix types					
	Number dispersing			P	P	P
	Age class and timing of dispersal			X	X	X
	Density dependent or independent dispersal			X	X	X
<i>Dispersal</i>	Dispersal -related mortality			X	X	X
	Number immigrating			P	P	P
	Movement rules					X