East Anglia
Offshore Wind

VATTENFALL

SCOTTISHPOWER RENEWABLES

East Anglia THREE

Appendix 13.4

North Sea Kittiwake Population Viability Analysis

Environmental Statement
Volume 3
Document Reference - 6.3.13 (4)

Author – MacArthur Green
East Anglia THREE Limited
Date – November 2015
Revision History – Revision A

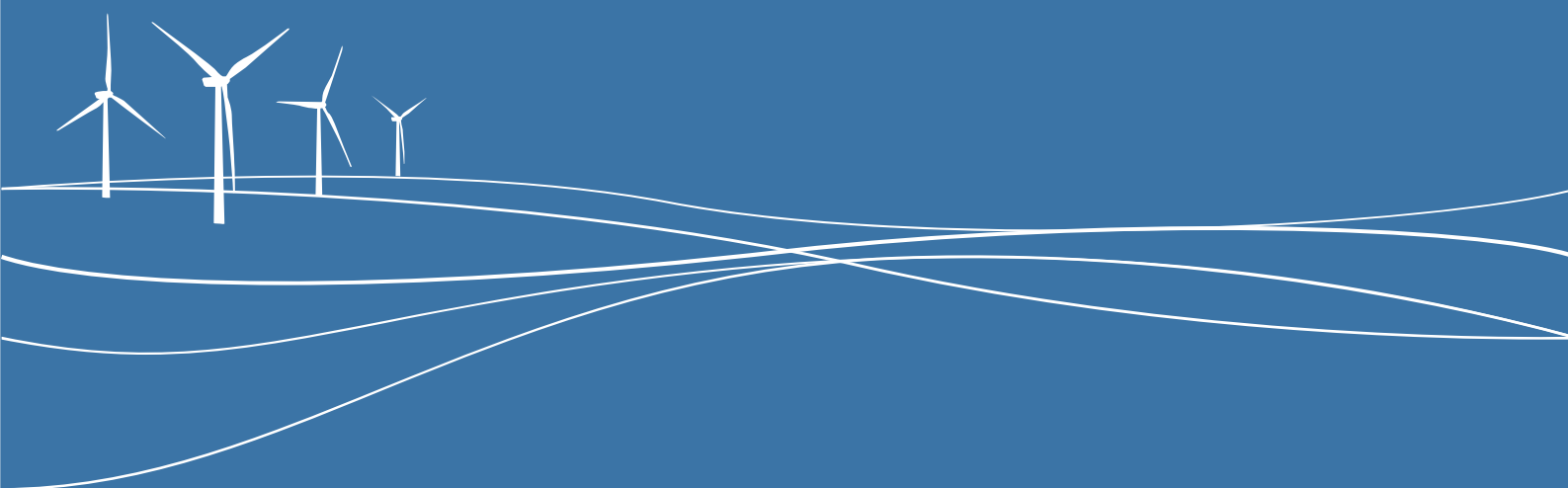

Table of Contents

1 INTRODUCTION

1. This report provides details of population viability analysis (PVA) for the North Sea kittiwake BDMPS (Biologically Defined Minimum Population Scale; Furness 2015) population. The population model was developed using two alternative sets of demographic rates, the first obtained from a review of the literature for this species and the second from a review conducted by the British Trust for Ornithology (BTO; Horswill and Robinson 2015). Full details of the methods are provided below. A range of outputs have been generated by the models and these are presented in the main results section and also in appendices to the report. The discussion reviews the results and provides a guide for their interpretation.

2 METHODS

2. The population models included the following aspects:

- Environmental stochasticity;
- Demographic stochasticity; and,
- Density independence and density dependent formulations.

3. The models used a matrix formulation and simulated an annual post-breeding census over a period of 25 annual time steps with one year age classes up to adults, which is a multi-age class for all individuals four years old and older. The initial population size was defined as either the spring or autumn BDMPS, against which relevant cumulative collision risks could be assessed. Annual collisions were assessed against the larger autumn population (as agreed with M. Kershaw, pers. comm.).

4. Two alternative sets of demographic rates were used. The first was obtained from a review of published studies, while the second was taken from a recent review conducted for the JNCC (Horswill and Robinson 2015; Table 2.1). During simulations, survival rates were drawn from beta distributions and the number of fledged young from stretched beta distributions (Morris and Doak 2002). Use of these probability distributions ensures that randomly selected values for each demographic rate are constrained to lie within biologically reasonable bounds. Demographic stochasticity on survival was modelled using a binomial process, whereby the number of individuals which survive from one year to the next is obtained using a binomial function (Akçakaya 1991). Combining environmental and demographic stochasticity in this manner permits both large scale effects (environmental) and chance population effects (demographic) to be simulated.

Table 2.1. Kittiwake demographic rates and starting population sizes used in the population models. Model KI1 based on data from sources listed in Table 2.2, Model KI2 from data listed in Horswill and Robinson 2015).

Model		Survival				Reproduction	
		0-1	1-2	2-3	Adult	Fledged young per pair	Age first breeding
Kittiwake 1 (KI1)	Mean	0.79	0.85	0.87	0.882	0.672	4
	SD	0.035	0.035	0.035	0.035	0.3	
Kittiwake 2 (KI2)	Mean	0.790	adult	adult	0.854	0.690	4
	SD	NA			0.051	0.296	

Table 2.2. Kittiwake demographic rate source literature (Scenario 1).

Rate	Source
Juvenile survival	Robinson 2005
Immature survival	Frederiksen et al. 2004. Age based survival rates from this study (Fig 3) were used to calibrate rates to match the juvenile and adult rates.
Adult survival	Robinson 2005
Age at first breeding	Robinson 2005
Reproduction	JNCC database (this was cited as Mavor 2008).

5. Both density independent (DI) and density dependent (DD) versions of the model were developed. The density independent version simulates the population with no feedback between population size and demographic rates. Population projections produced by such models will either increase to infinity or decrease to extinction.

6. Horswill and Robinson (2015) reviewed the evidence for density dependent regulation in seabird populations and found that regulation can operate via a range of mechanisms. At the scale of the population being modelled for this report it is therefore likely that regulation may be operating on different components of the population by different means. Ecological theory suggests that long lived, slow breeding species such as seabirds buffer themselves against variations in their environment through varying reproductive success rather than survival. Thus the

demographic rate most likely to reflect density dependent effects will be reproduction, with breeding success declining as the population approaches a ceiling set by food resources. Thus, it was considered more appropriate to model regulation through reproduction rather than across multiple rates. This is also more precautionary for assessing mortality impacts, since seabird population growth is more sensitive to variation in survival (particularly of adults). Thus, the modelled population's ability to recover is lower when density dependence operates through reproduction than through survival.

7. Relating the reproductive rate to the population size also corresponds with studies which indicate that foraging ranges are negatively related to food availability which in turn affects variations in reproductive success between colonies.

8. A Weibull function was used for the density dependent modelling. This function relates reproduction (F) to population size (N) using the following equation:

$$F = maxF * \exp(-a * (N^b))$$

9. Where maxF = the estimated biological maximum reproductive rate for kittiwake and a and b are scale and shape parameters (respectively) for the Weibull function.

Values for a and b were determined as follows:

i. Three initial values for b were considered; 0.8, 1.0 and 1.2. Preliminary runs revealed that with b set to 1, logistic population growth was obtained. Under this formulation population growth begins to decline when the population is greater than half the carrying capacity. This was not considered to be a good fit for seabird populations which typically don't exhibit reductions in their growth rates until they are approaching carrying capacity (e.g. Cury et al. 2011). Thus the higher value (1.2) was adopted as a more suitable value for simulating seabird population dynamics.

ii. The value for a was calculated using the equation above with b = 1.2, F = to the mean reproductive rate (Table 1), maxF = to the estimated biological maximum (1.25) and N = to the initial population estimate (Table 2.1).

10. Calculating the density dependent parameters in this manner ensured that the baseline population size was tuned to remain close to the initial size, with the

strength of density dependence selected to be appropriate for a seabird species (on the basis of available evidence). A wider range of values of density dependence could be explored, but the aim of the work was to indicate the possible difference in output between a biologically unrealistic density independent (worst case) scenario, and a plausible density dependent model (more realistic but with a precautionary density dependent formulation in the absence of empirical evidence on density dependent mechanisms in this population). A closed population was assumed, which is appropriate when considering effects on the BDMPS. The initial total population size was taken from Furness (2015). This was then divided among the four age classes using the stable age distribution obtained from a deterministic version of the population model.

11. Additional mortality was modelled as a per capita rate. The rate was calculated at the beginning of each simulation as the absolute mortality for that simulation divided by the initial total population size. In this manner mortality tracks the population size through the simulation and remains in proportion throughout. Furthermore, the additional mortality was applied to all age classes in proportion to their presence (i.e. wind farm mortality was not considered to target specific age classes). A range of mortality values was modelled, from zero to 5,000 (selected in order to generate results exceeding the highest cumulative total), at increments of 250. At each level of mortality, 5,000 simulations were conducted and summary outputs calculated. Most outputs used data from all years of the simulations, however the population growth rate was calculated as the average rate between the fifth and the final (25th) year to avoid initial conditions exerting a bias on the value obtained.

12. The graphical outputs include lines indicating the estimated collision mortality for either the BDMPS period being simulated (spring and autumn) or annually (modelled using the autumn BDMPS) for the following:

- The East Anglia THREE site alone;
- Windfarms in Tiers 1 to 3;
- Windfarms in Tiers 4 and 5 (including East Anglia THREE); and,
- Windfarms in Tiers 1 to 5 (including East Anglia THREE).

13. The following 12 combinations of model are presented:

- Demographic set 1 or 2 (KI1 or KI2);
- Density independent or density dependent; and,
- Spring, autumn or annual;

14. Graphical outputs for each simulated scenario are provided in Appendix 1:

- Probability the population will decline below a range of percentages of the initial size (0, 1, 2, 5, 10, 15, 20, 25 and 50%), and change in this probability (plotted separately);
- Probability the population size in the final year (with additional mortality) will be less than a range of percentages of the initial population size (0, 1, 2, 5, 10, 15, 20, 25, 50%), and change in this probability (plotted separately);
- Probability the population size in the final year (with additional mortality) will be less than a range of percentages of the unimpacted final population size (0, 1, 2, 5, 10, 15, 20, 25, 50%), and change in this probability (plotted separately);
- Ratio of impacted population size to un-impacted size (Counterfactual of Population Size; CPS) across the full mortality range for each species, calculated at 5 year intervals up to 25 years;
- Population growth rate and change in population growth rate (plotted separately), presented across the full mortality range for each species, calculated at the following percentiles: 5%, 33% 50% (median), 67%, 95%. The alone and cumulative mortality estimates are included on these figures, using Band Model Option 1 estimates at 98.9%; and,
- Predicted population projection for 25 years at zero additional mortality ('baseline') and at a maximum additional mortality level (plotted together), presented as median population size (across all 5,000 simulations) and 95% confidence intervals (i.e. derived from simulations between 2.5 - 97.5% of the range).

15. Tabulated outputs for each simulated scenario are provided in Appendix 2:

- Population growth rate (range of percentiles) and change in population growth rate at each mortality level;
- Median population size at 5 year intervals at each mortality level;

- Probability (and change in probability) population will be below initial size (100%) and a range of sizes down to 50% of initial size in any year of simulation at each mortality level;
- Probability (and change in probability) population will be below initial size (100%) and a range of sizes down to 50% of initial size in final year of simulation at each mortality level; and,
- Probability (and change in probability) population will be below median unimpacted size (100%) and a range of sizes down to 50% of median unimpacted size in final year of simulation at each mortality level.

3 RESULTS

16. The full results are provided in Annexes 1 and 2.

17. The impact of mortality at levels for the East Anglia THREE project alone (49, 90 and 146 for spring, autumn and annual periods respectively) would have no detectable impacts on the kittiwake BDMPS population. For example, population growth in the density independent models would be reduced by less than 0.04% (KI1) and 0.08% (KI2) at annual mortalities of 250. The smallest counterfactual of population size (CPS) at a mortality of 250 was 98.24% (annual period, KI2).

18. A summary of CPS and growth rates for baseline (unimpacted) simulations and mortalities similar to the respective cumulative totals for the spring, autumn and annual periods generated using all versions of the model is presented in Table 3.1.

19. Although the absolute predictions of growth varied between the two sets of demographic rates (KI1 vs. KI2) the reductions in growth rate and population size (CPS) were very similar (e.g. for density independent simulations the growth rate reduction with a mortality of 4,000 were 0.44% and 0.52% for the two models respectively).

Table 3.1. Summary outputs from the annual model for baseline simulations (0 additional mortality) and with an annual additional mortality of 4,000 (annual) and 1,500 (spring and autumn). Note that these values were selected as being close to the predicted cumulative mortality for each period: 4,041, 1,345 and 1,552 respectively.

Model	BDMPS	Additional mortality	Density dependence	Baseline growth rate (%)	Growth rate at annual additional (%)	Counterfactual of population size after 25 years at additional mortality (%)
KI1	Annual	4,000	Off	3.60	3.16	89.62
			On	0.25	0.16	96.74
	Autumn	1,500	Off	3.60	3.43	96.31
			On	0.27	0.22	98.38
	Spring	1,500	Off	3.59	3.36	95.22
			On	0.25	0.22	98.57
KI2	Annual	4,000	Off	1.46	0.94	89.06
			On	0.37	0.27	95.54
	Autumn	1,500	Off	1.38	1.26	96.45
			On	0.38	0.34	98.35
	Spring	1,500	Off	1.46	1.17	93.46
			On	0.39	0.32	98.30

20. The density dependent model was parameterised to maintain the population around the initial size, and hence the small amounts of predicted growth generated (less than 0.4%). Indeed, these growth rates would decline to zero given longer simulation periods. However, over the relatively short 25 year period used here the small amount of growth predicted reflected the populations equilibrating around the level defined by the demographic and density dependent parameters which were slightly higher than the initial size. This has no effect on the values obtained for the relative metrics.

21. The more precautionary, but less realistic, density independent models predicted the autumn BDMPS population would decline by just over 10% as a result of annual mortality of 4,000 individuals, while the more realistic density dependent models predicted a decline of less than 5%. Smaller magnitudes of impact were predicted for the seasonal mortalities, which reflects the lower collision mortalities during specific seasons.

4 DISCUSSION

22. It is thought that the British kittiwake population has declined by an estimated 50% since the late 1960s, although that period has encompassed periods of increase as well as decline (http://jncc.defra.gov.uk/page-2889, accessed 02/07/2015). If it is assumed that the longer term decline will continue or that the population is unlikely to recover during the next few decades then the absolute predictions of the baseline density independent population models (growth of 1.5 to 3.6% per year) are unlikely to prove realistic. This may, in part, reflect the fact that demographic data were mainly collected in studies of kittiwakes during the period of population growth rather than during the recent years of population decline. However, since it is more appropriate to consider the difference in results between baseline and impacted simulations, it is notable that the two parameters sets generate very similar predictions in terms of the relative impact. For example, the maximum reductions in growth in Table 3 (KI1 0.44%; KI2 0.52%) are different by only 0.08%, despite the larger difference between them in terms of absolute growth of over 2% (KI1 3.6%; KI2 1.5%). A similar result was obtained when comparing the density dependent results. Thus it appears that parameter selection is not a critical aspect for predicting potential impacts on the population.

23. While populations naturally fluctuate, they are subject to regulating influences which both prevent uncontrolled growth and also buffer them against severe declines. These regulatory processes are referred to as density dependent, since the degree of influence is determined by the population density through competition for limited resources. Given the difficulty of predicting longer term trends in seabird populations, the density dependent models presented here, tuned to maintain the population around its current size under baseline conditions (no additional impacts), are considered to be the most appropriate ones on which to base impact predictions. Furthermore, these were parameterised to be precautionary in form by focusing density dependence only on productivity and not on survival rates or age of first breeding.

24. However, there is limited data available to inform the most appropriate form and strength of density dependence and therefore the results need to be interpreted carefully. Consideration of the assumptions made in defining and applying density dependence in the models will assist in determining the reliability of the results obtained. Density dependence can operate on any aspect of population demography

where individuals may compete for limited resources. In the case of seabirds which spend more than half the year at sea it is very difficult to study competition at sea and therefore to even estimate if such competition exists and how it might operate. Consequently we have focussed on the breeding period. In long-lived species such as seabirds, which produce relatively few young per breeding attempt, life-history theory predicts that adults will prioritise their survival over that of their young (specifically eggs and chicks) during any given breeding attempt (Cairns 1987). To reflect this, density dependence was applied to reproduction only. It is acknowledged that this is a simplification, and that adult survival may also be reduced by competition during the breeding season. However, the magnitude of such reductions is likely to be small. Furthermore, introducing additional density dependent relationships into the modelling (i.e. on survival) would add additional complexity and render interpretation of results more difficult, with no guarantee that the models would necessarily be more appropriate. Also, since longer-lived slow breeding species like seabirds are more sensitive to changes in adult survival than reproduction, simulating density dependence via survival enhances the population's buffering ability. Therefore applying density dependence through reproduction generates more precautionary outputs than through survival.

25. Given the above, together with the limited data available, it was considered pragmatic and precautionary to apply density dependence to reproduction only. The hypothesised mechanism by which population size affects reproduction was through competition for food, rather than breeding space. This was based on the observation that breeding space does not appear to be a constraint for seabird populations at the wider scale. In addition food supplies are thought to play an important role in driving changes in breeding success and population size (e.g. Cury et al. 2011). In the model, all age classes compete for food and thus, the strength of density dependence was determined by the combined number in all age classes.

26. A Weibull function was used to model the proportion of young fledged per pair. The parameters defining the shape of this function were estimated on the basis that seabirds don't begin to show density dependence until their populations approach carrying capacity (Cury et al. 2011) and assumptions about the biologically determined maximum number which could be fledged per pair derived from a review of seabird productivity estimates (a maximum of 1.25 for the kittiwake). In addition, previous assessments have explored alternative density dependent parameter values and concluded that the approach adopted here is precautionary

and almost certainly over-estimates the effects of additional mortality (Smart Wind 2014).

27. Although it is difficult to robustly validate the model outputs, the growth predictions are considered reasonable. Nevertheless, the models have an inherent realism, since unlimited growth is prevented and reductions are buffered through eased competition. In contrast, the density independent simulations can be considered as providing 'worst case' precautionary outputs, since the absence of the buffering of negatively impacted populations removes a critical component present in natural populations which ensures population maintenance. In providing both forms of model output the range of outcomes which could be expected are potentially bracketed. However, it is also worth noting that the form and strength of density dependence used were precautionary, therefore the real population response may in fact be smaller than even the density dependent model predictions.

28. A critical feature for interpreting population model outputs is to focus on the relative changes predicted. It is very tempting to regard an absolute prediction as an indication of how the population is going to change. However, caution must be exercised before assuming that the absolute predictions can be relied upon. For this reason, the most robust interpretation of the results from either the density dependent or density independent models is in terms of the relative change in outputs between impacted and un-impacted scenarios. Adopting this approach takes away the requirement for the models to generate absolute predictions of growth which satisfy some preconceived expectation and avoids the temptation to set targets based on potentially unreliable estimates of future growth. In other words, while the absolute predictions made may prove to be accurate (which among other things would assume that environmental conditions remain the same for the next 25 years as they had been when demographic data were collected which seems unlikely given our understanding of climate change impacts and effects of changing fisheries policy), the relative changes are expected to be much less sensitive to the choice of model structure or the precise value for the demographic rates used. Consequently, much greater confidence can be placed in conclusions derived from the latter.

5 REFERENCES

Akçakaya, H. R. (1991). A method for simulating demographic stochasticity. *Ecological Modelling* 54: 133-136.

Cairns, D. K. (1987). Seabirds as indicators of marine food supplies. *Biological Oceanography* 5:261–271.

Cury P. M., Boyd I., Bonhommeau S., Anker-Nilssen T., Crawford R. J. M., Furness R. W., Mills J. A., et al. (2011). Global seabird response to forage fish depletion: one-third for the birds. *Science* 334: 1703–1706.

Frederiksen, M., Wanless, S. & Harris, M. P., (2004). Estimating true age–dependence in survival when only adults can be observed: an example with Black–legged Kittiwakes. *Animal Biodiversity and Conservation*, 27.1: 541–548.

Furness, R.W. (2015). *Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales* (BDMPS). Natural England Commissioned Report Number 164. 389 pp.

Horswill, C. & Robinson R. A. (2015). *Review of seabird demographic rates and density dependence.* JNCC Report No. 552. Joint Nature Conservation Committee, Peterborough

Mavor, R.A., Heubeck, M., Schmitt, S. and Parsons, M. (2008). *Seabird numbers and breeding success in Britain and Ireland, (2006)*. JNCC. Peterborough. (UK Nature Conservation, No. 31).

Morris, W.F. and Doak, D.F. (2002). *Quantitative conservation biology: theory and practice of population viability analysis*. Sinauer, MA.

Robinson, R.A. (2005) BirdFacts: profiles of birds occurring in Britain & Ireland (BTO Research Report 407). BTO, Thetford

Smart Wind (2014). Hornsea Offshore Wind Farm Project One PVA Note. Appendix X to the Response submitted for Deadline IV Application Reference: EN010033 22 April 2014 (http://infrastructure.planningportal.gov.uk/wp-content/ipc/uploads/projects/EN010033/2.%20Post-Submission/Representations/ExA%20Questions/Appendix%20X%20-%20PVA%20Note.pdf – accessed 02/07/2015)

6 ANNEX 1 - FIGURES

Key to figure numbers.

Figure numbers	Parameter set	Period	Type
1 to 10	KI1	Annual	Density independent
11 to 20			Density dependent
21 to 30		Autumn	Density independent
31 to 40			Density dependent
41 to 50		Spring	Density independent
51 to 60			Density dependent
61 to 70	KI2	Annual	Density independent
71 to 80			Density dependent
81 to 90		Autumn	Density independent
91 to 100			Density dependent
101 to 110		Spring	Density independent
111 to 120			Density dependent

Figures for each model type are in the following order:

Order	Figure content
1	Probability of decline relative to initial size
2	Increase in probability of decline relative to initial size
3	Probability final population size will be less than initial size
4	Increase in probability final population size will be less than initial size
5	Probability final population size will be less than the median unimpacted population size
6	Change in probability final population size will be less than the median unimpacted population size
7	Median population size at 5 year intervals as a proportion of un-impacted median population size (CPS)
8	Population growth rate
9	Change in population growth rate
10	Baseline and maximum impact population projections

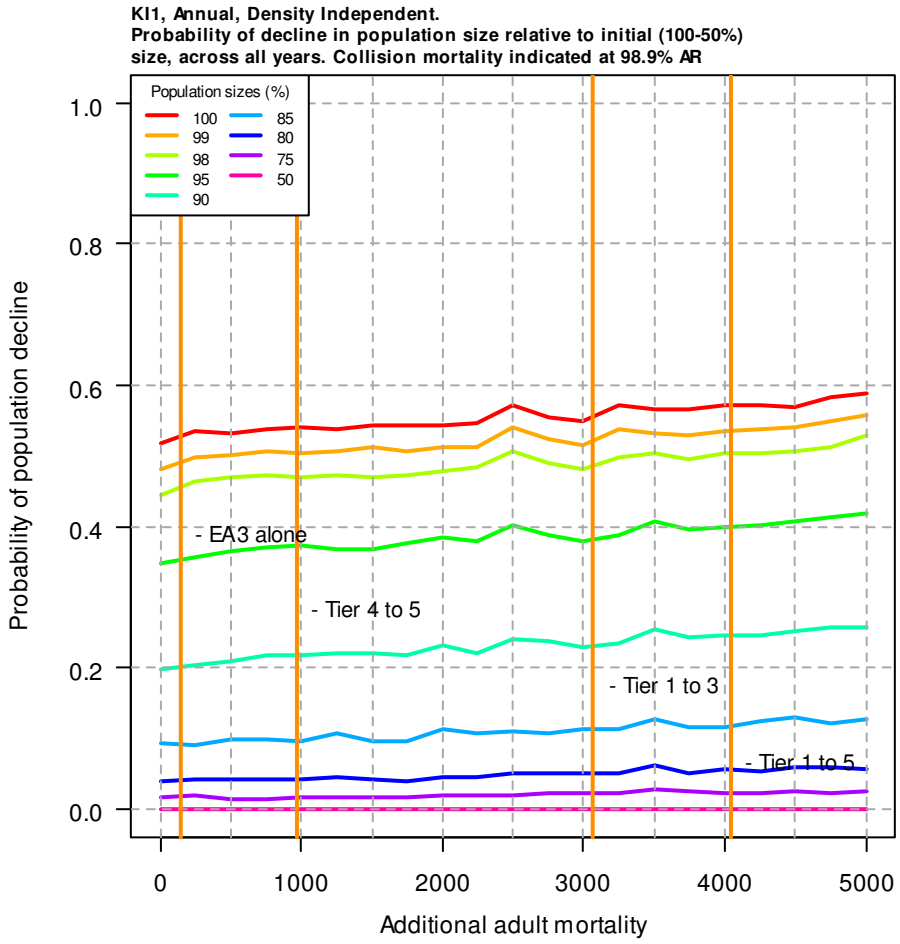

Figure 1 Kittiwake - Annual: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

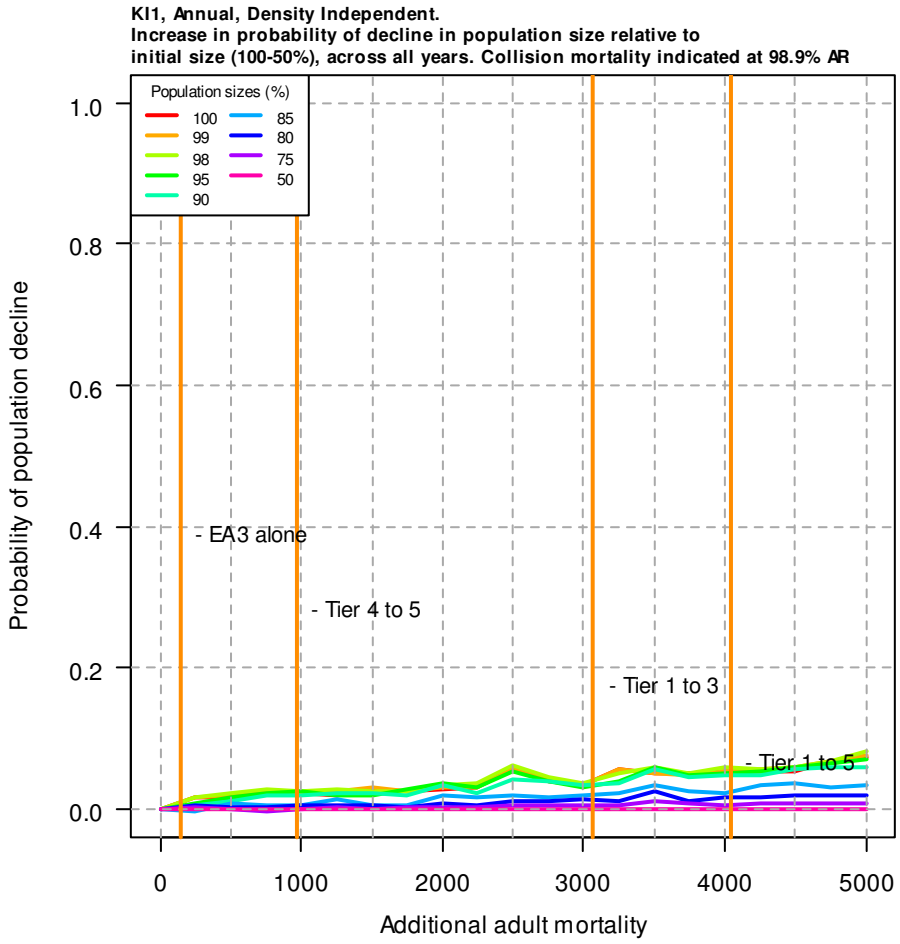

Figure 2 Kittiwake - Annual: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

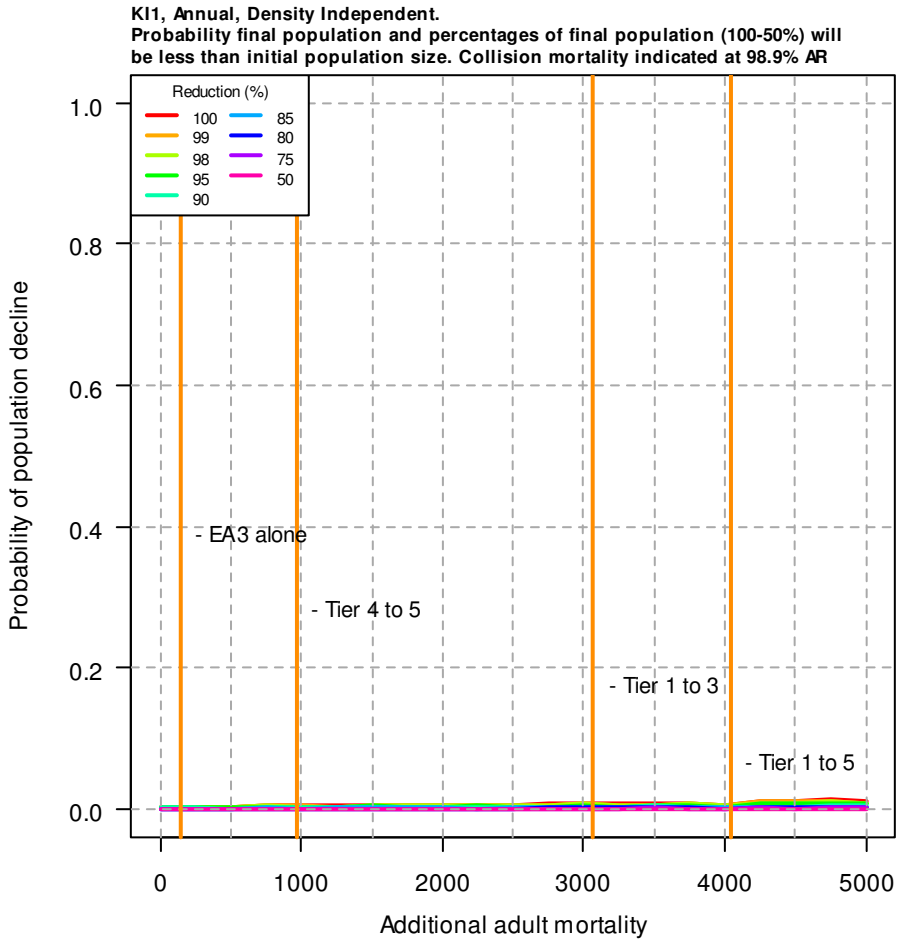

Figure 3 Kittiwake - Annual: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

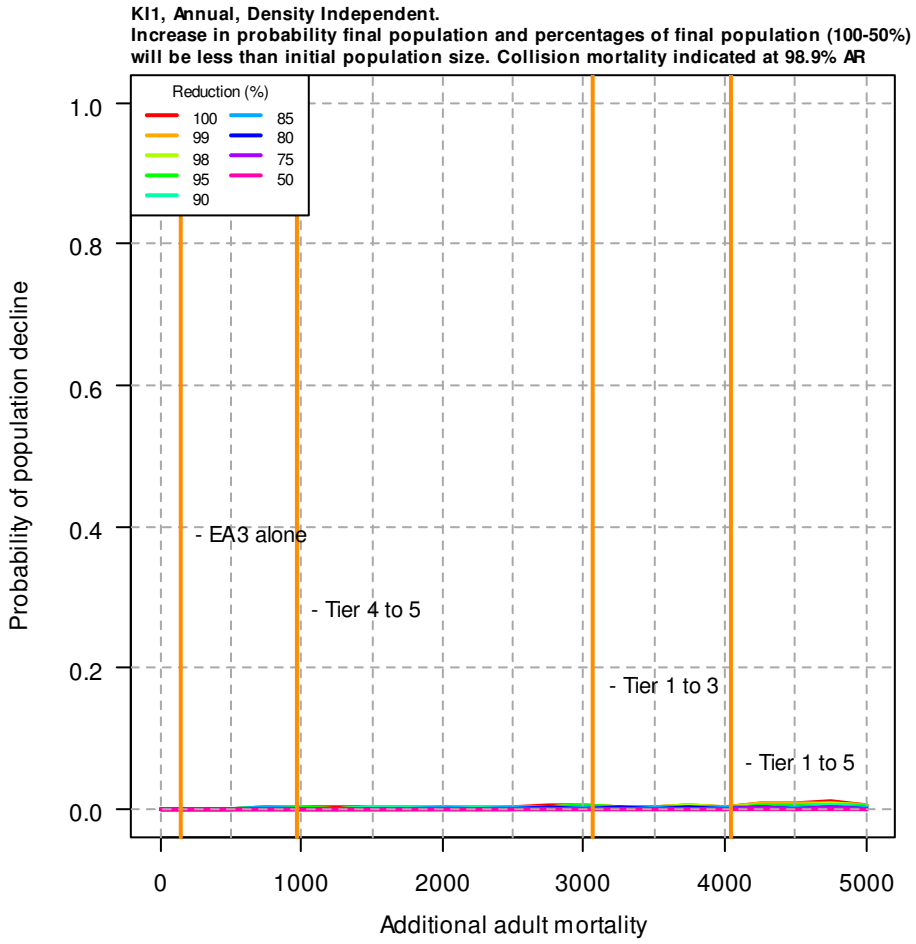

Figure 4 Kittiwake - Annual: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

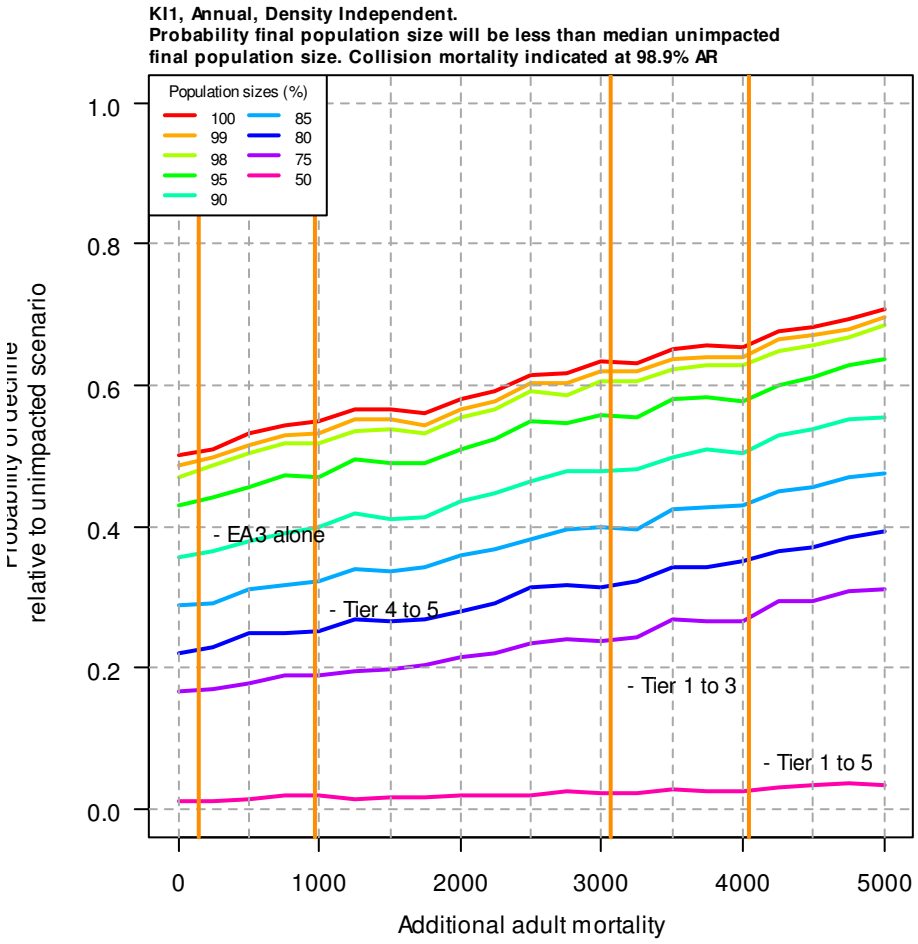

Figure 5 Kittiwake - Annual: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

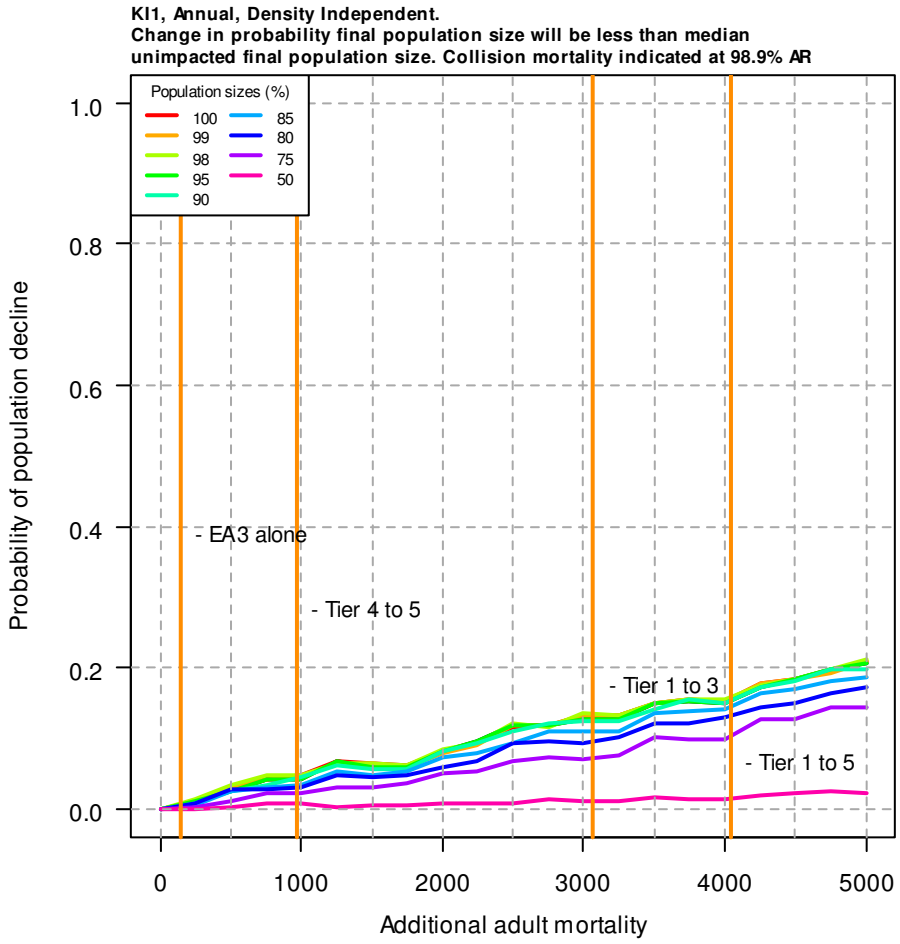

Figure 6 Kittiwake - Annual: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

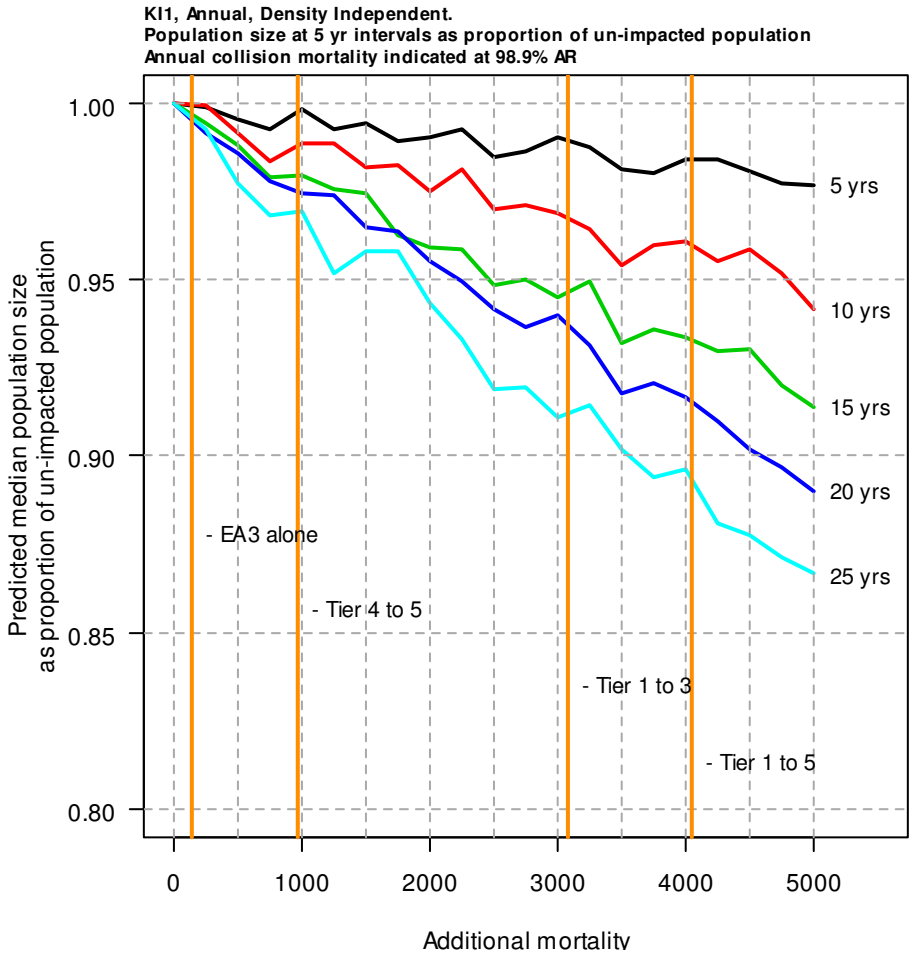

Figure 7 Kittiwake - Annual: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

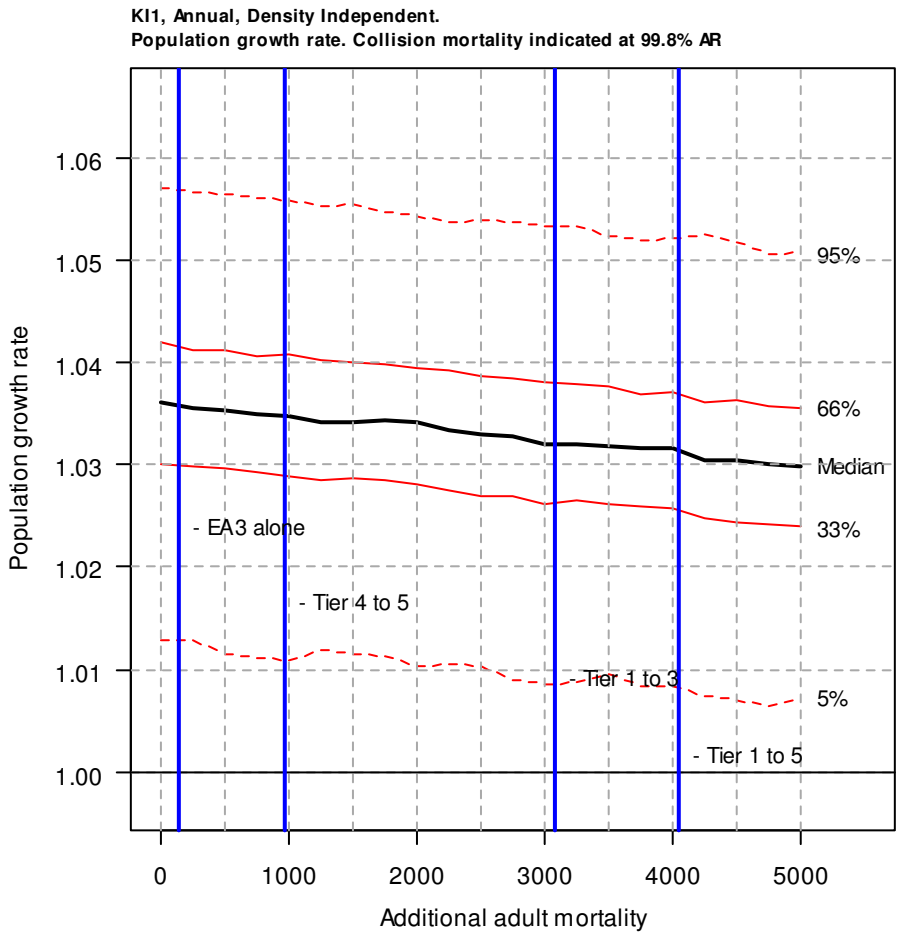

Figure 8 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

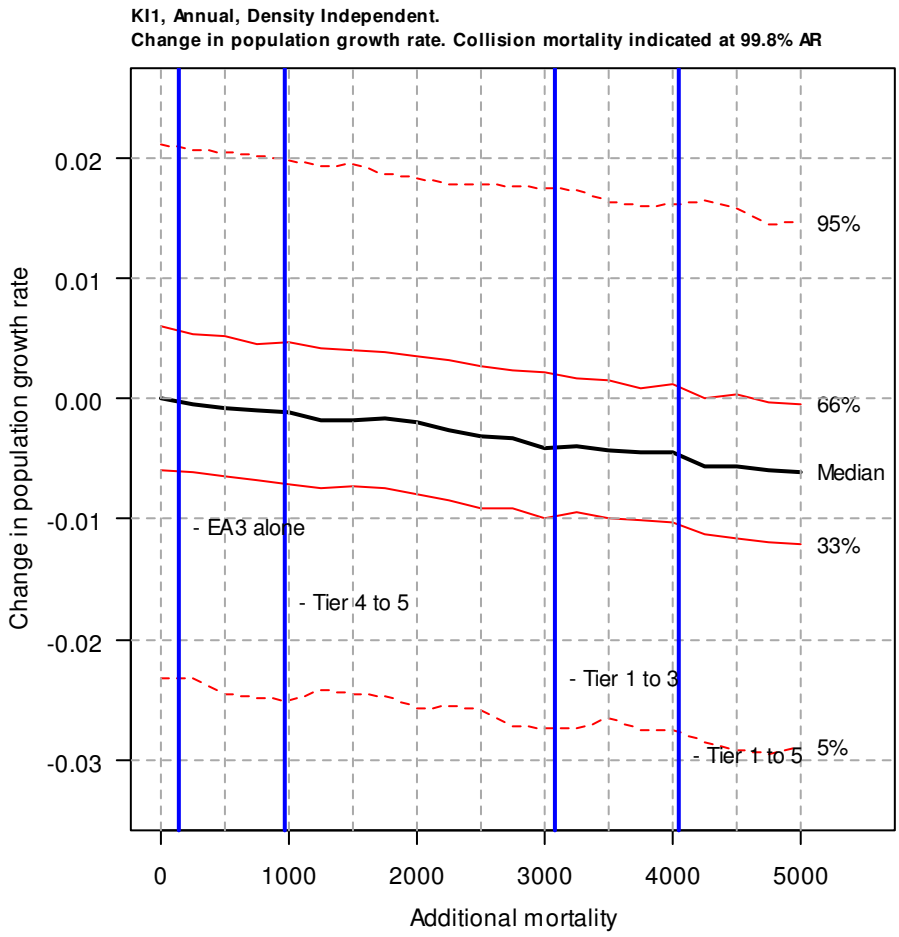

Figure 9 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

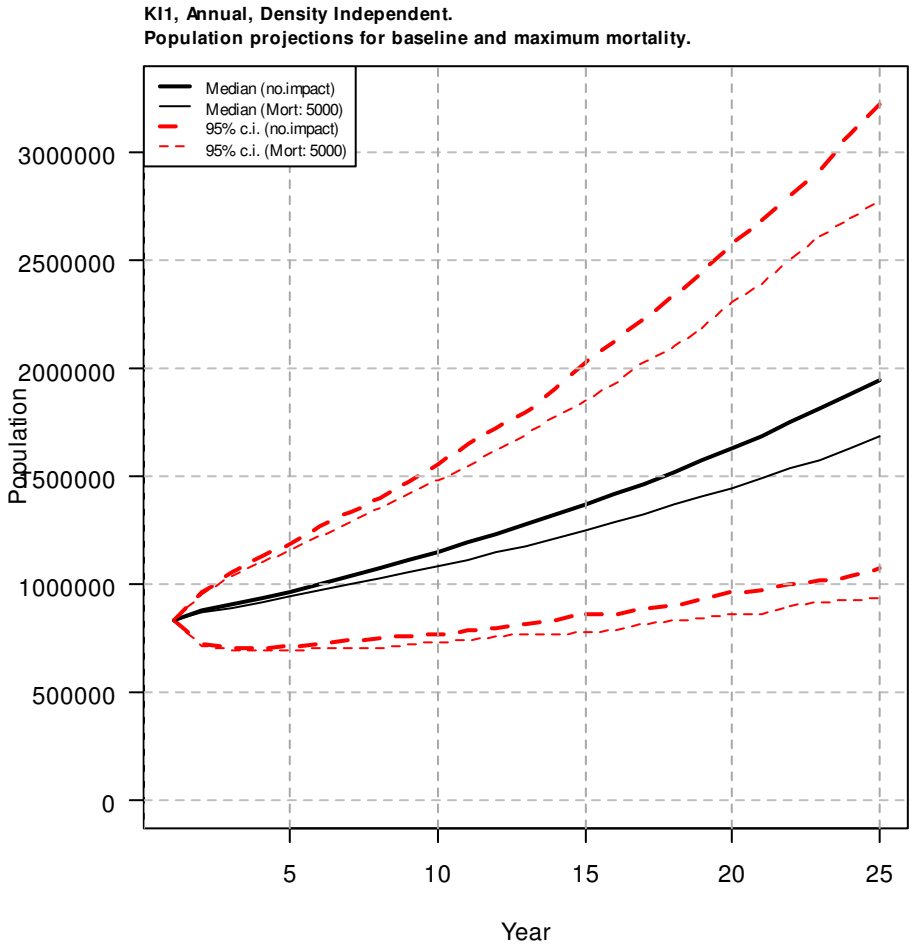

Figure 10 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

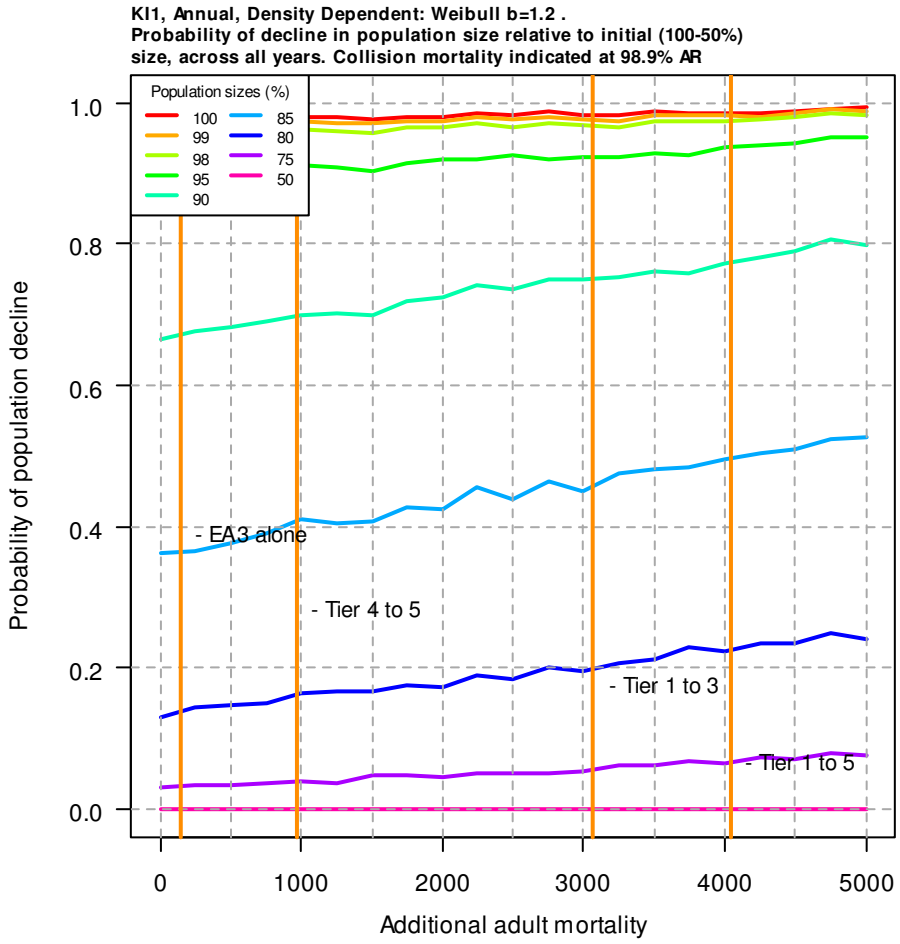

Figure 11 Kittiwake - Annual: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

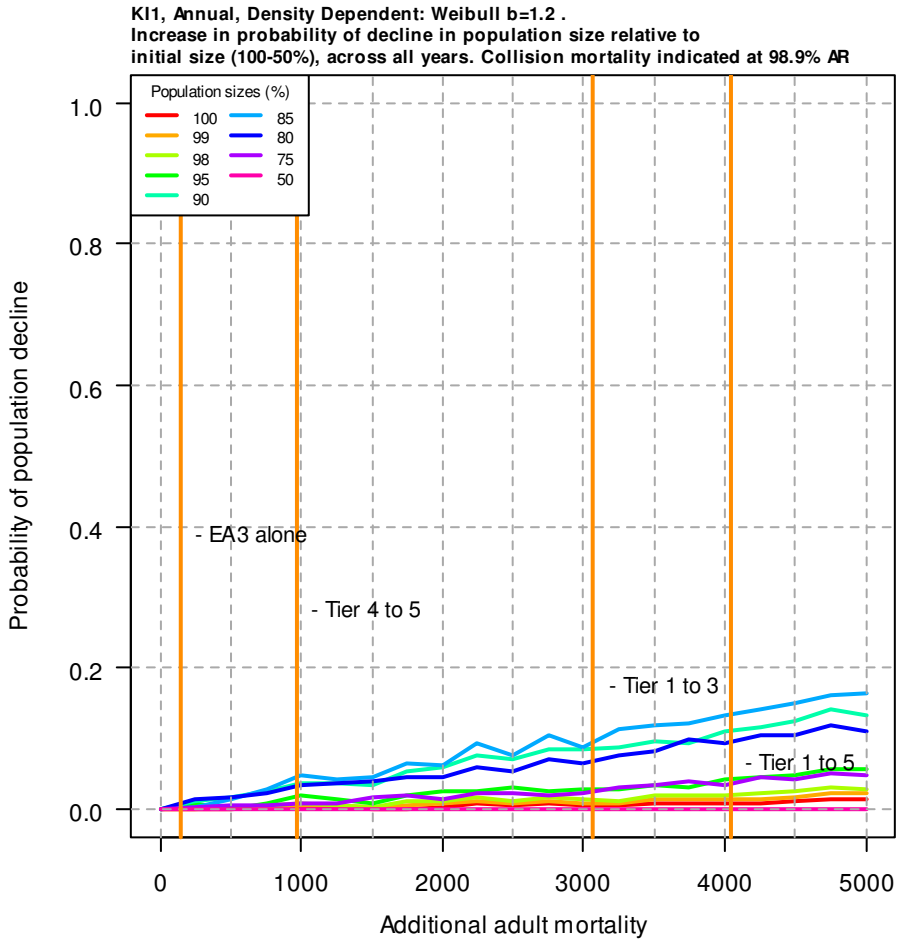

Figure 12 Kittiwake - Annual: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

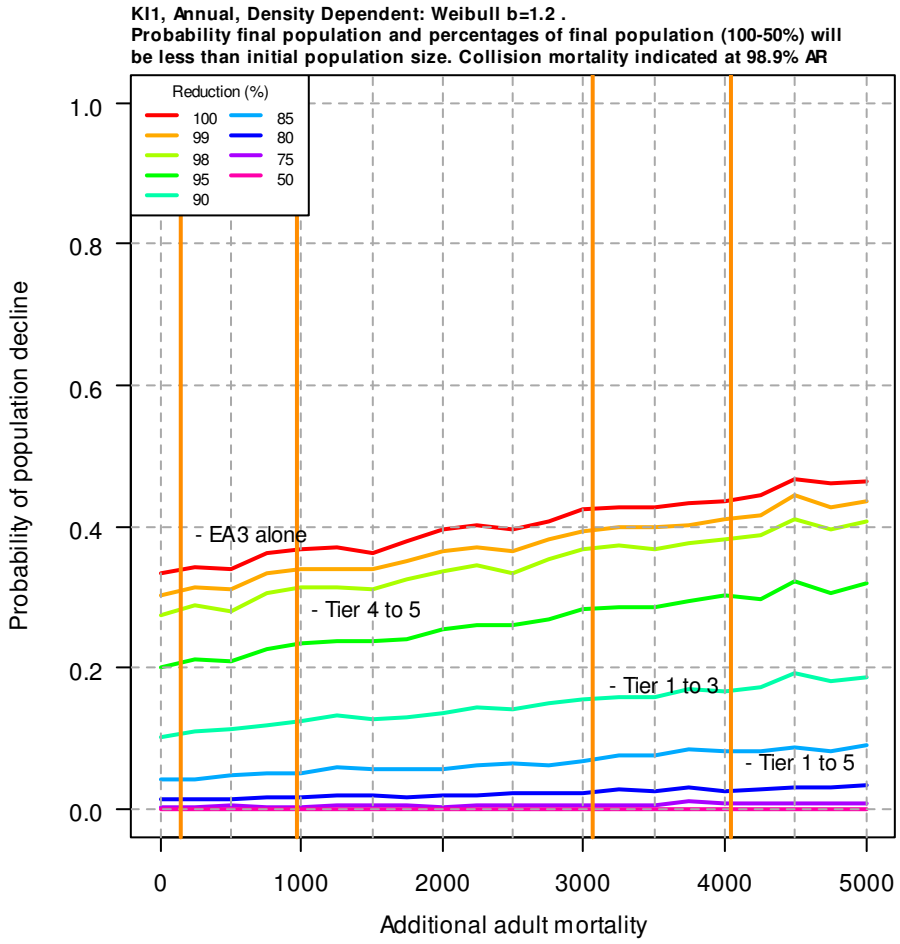

Figure 13 Kittiwake - Annual: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

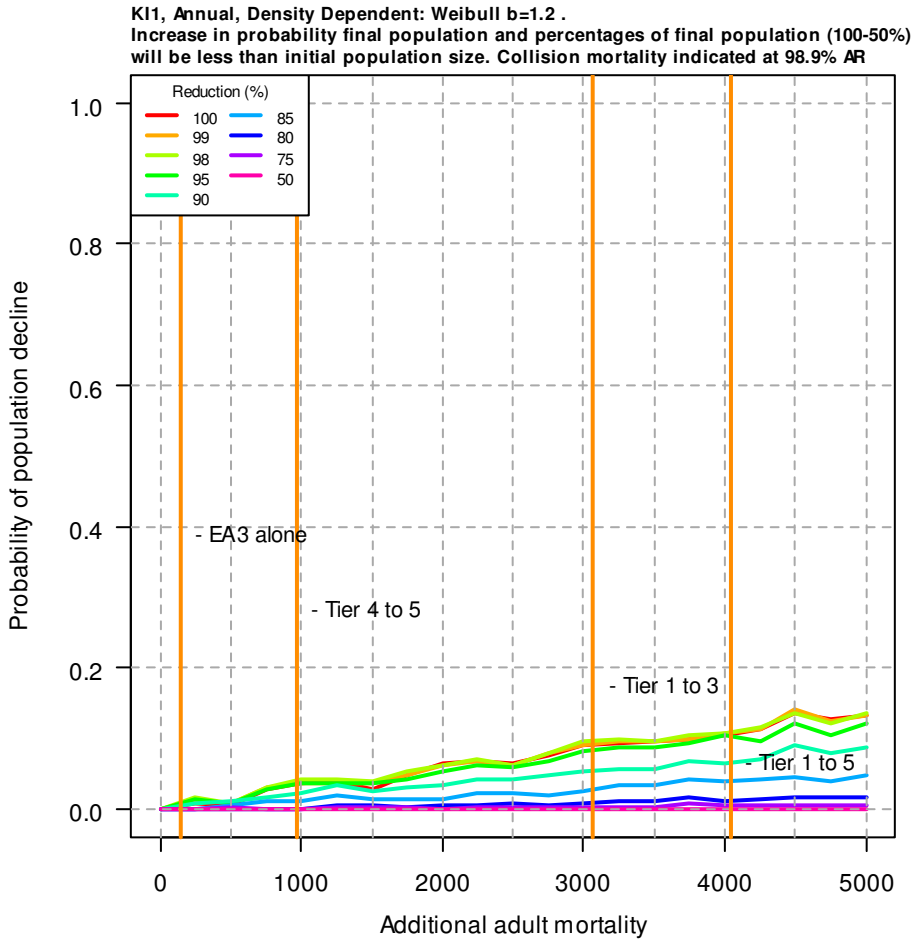

Figure 14 Kittiwake - Annual: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

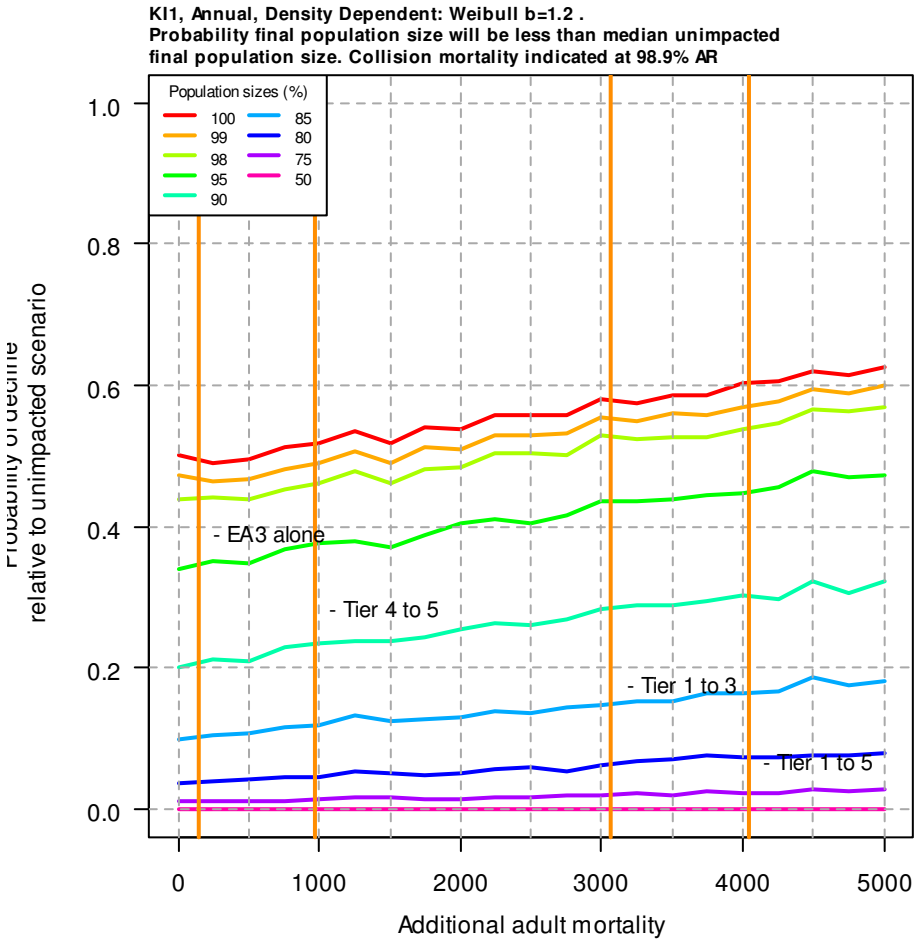

Figure 15 Kittiwake - Annual: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

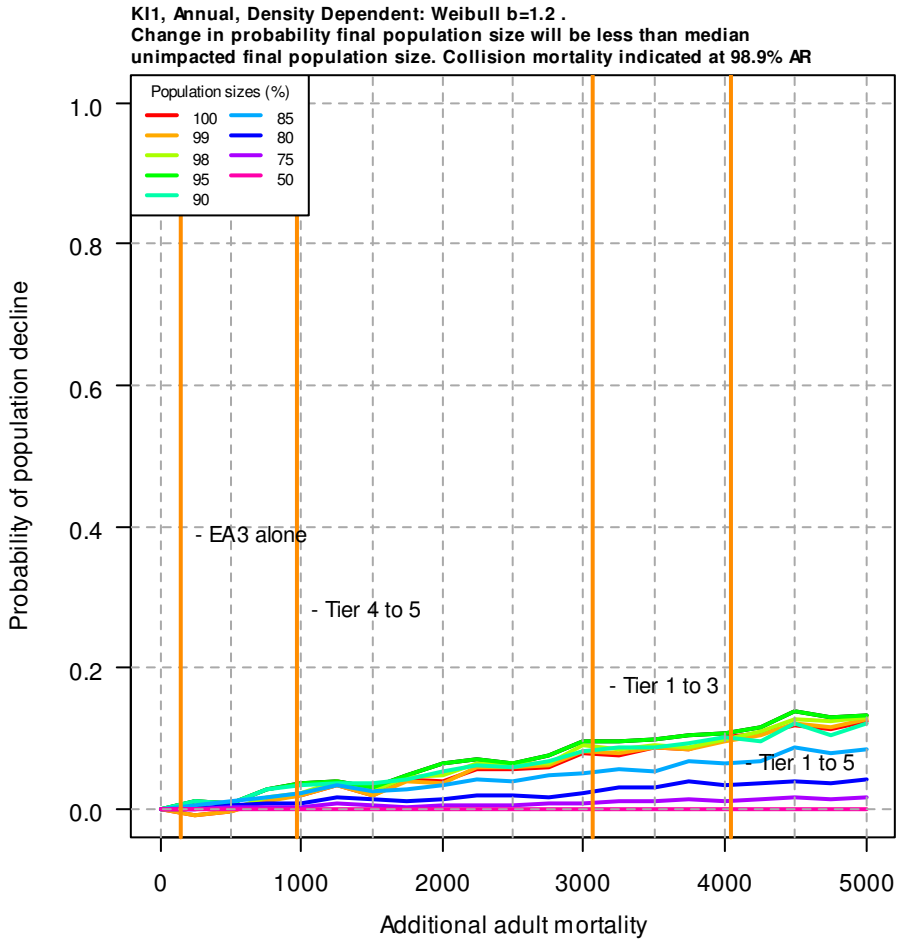

Figure 16 Kittiwake - Annual: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

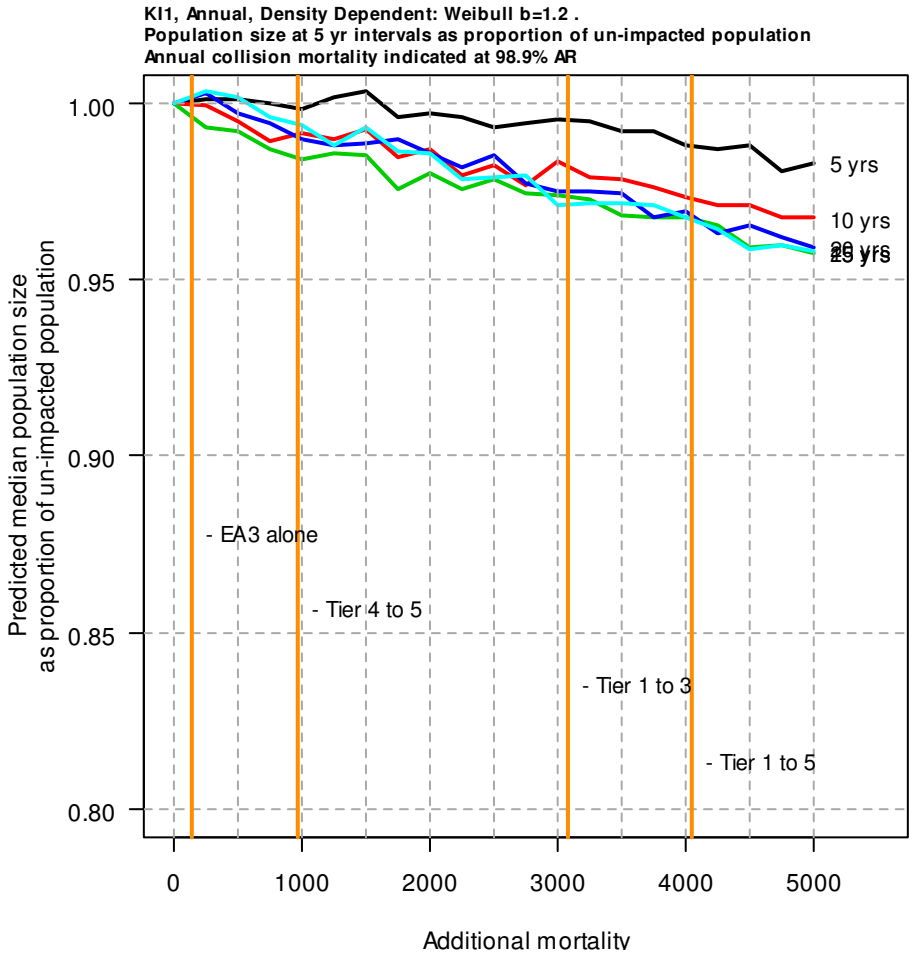

Figure 17 Kittiwake - Annual: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

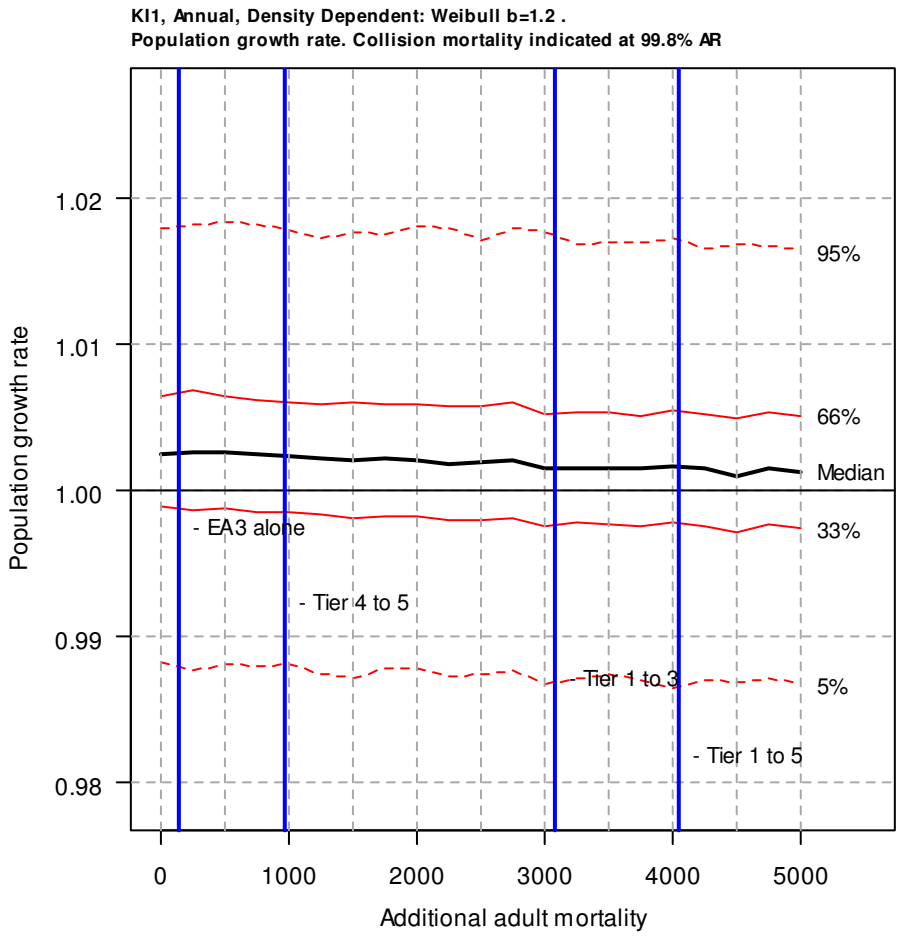

Figure 18 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

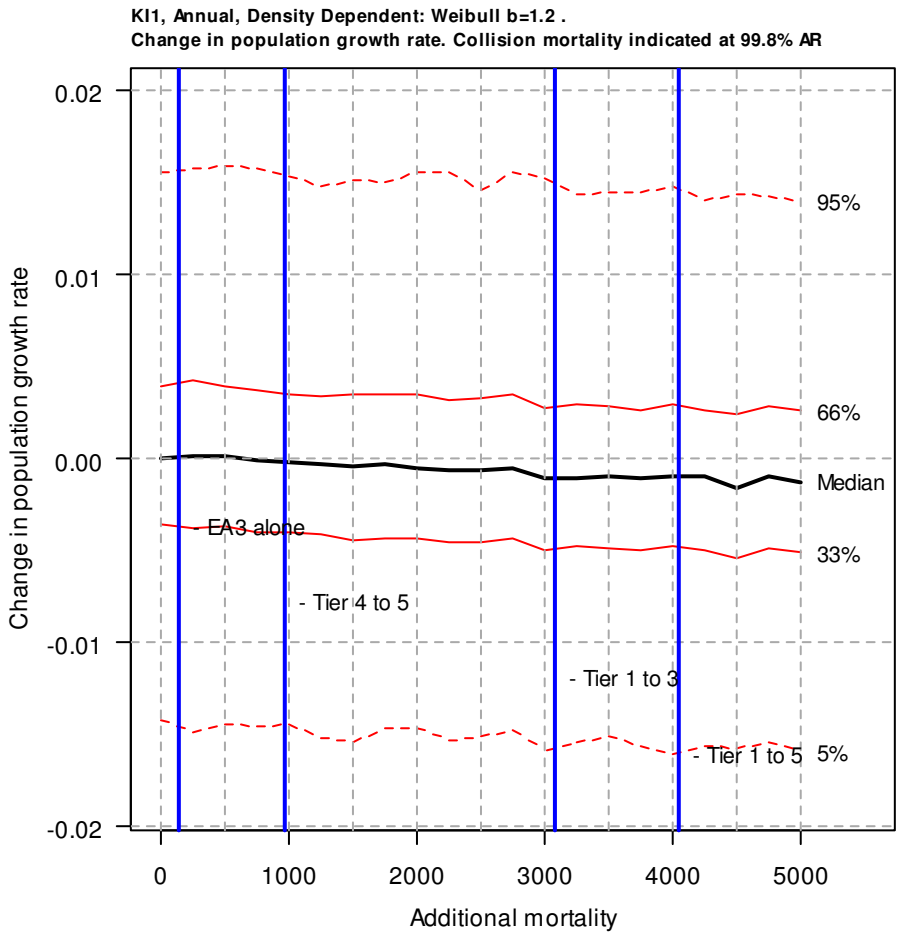

Figure 19 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

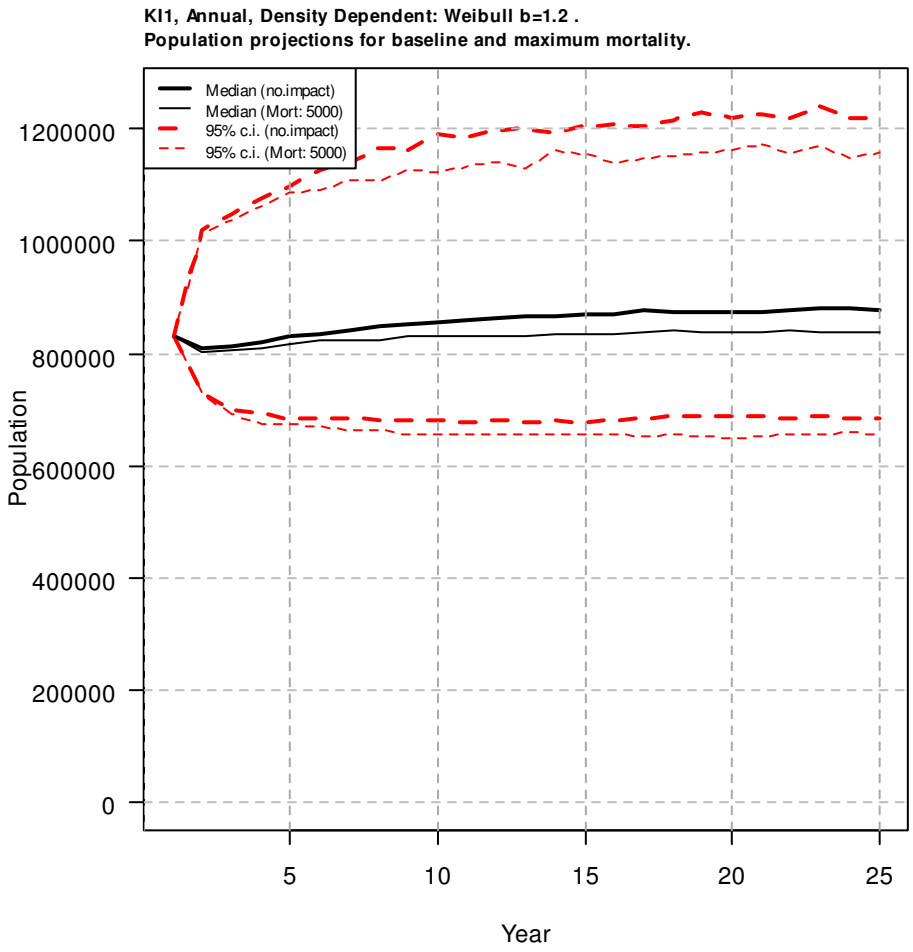

Figure 20 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

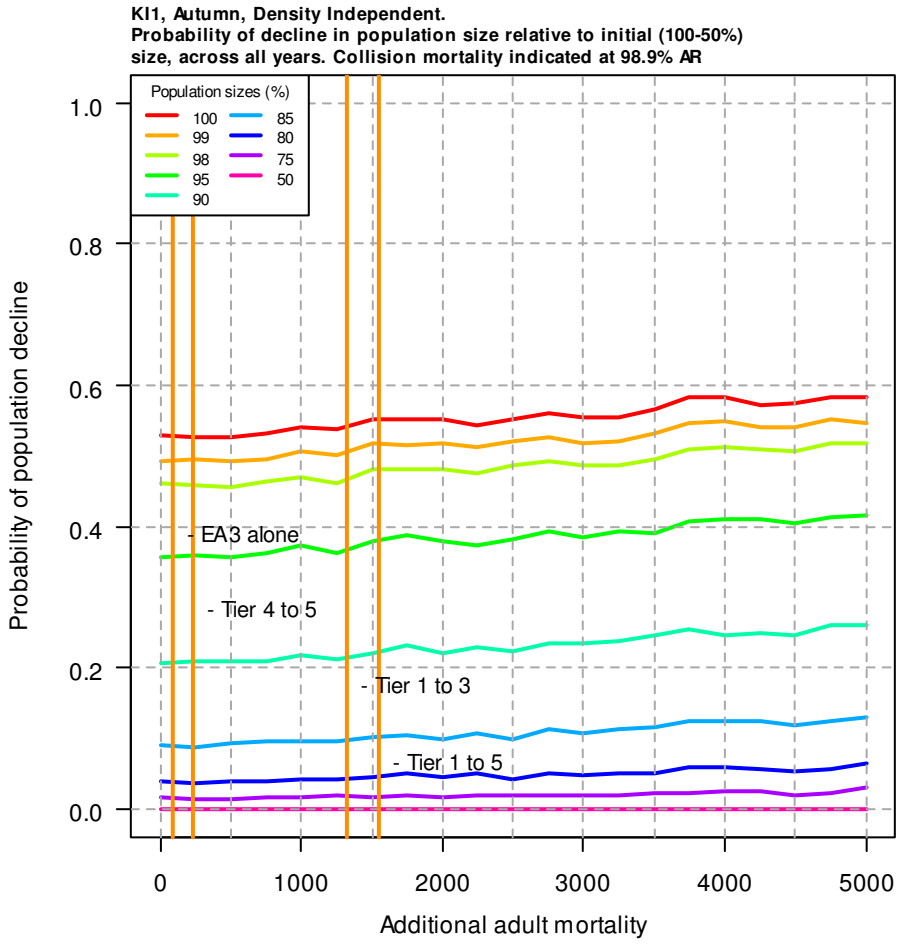

Figure 21 Kittiwake - Autumn: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

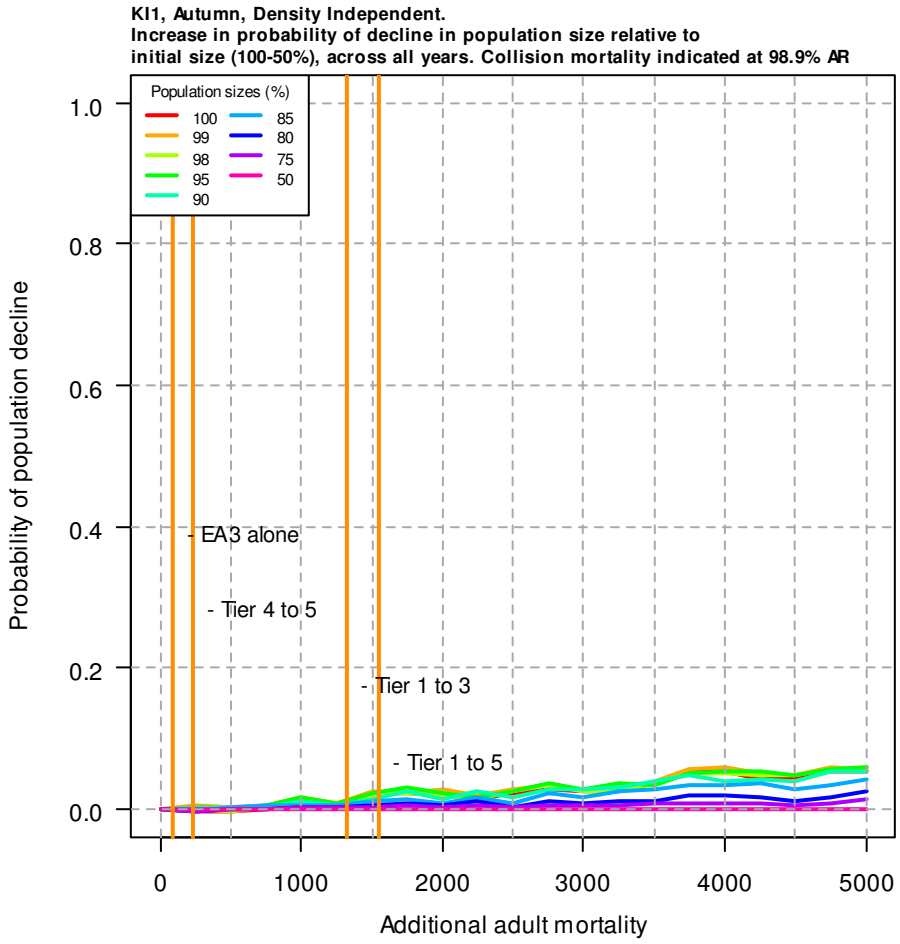

Figure 22 Kittiwake - Autumn: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

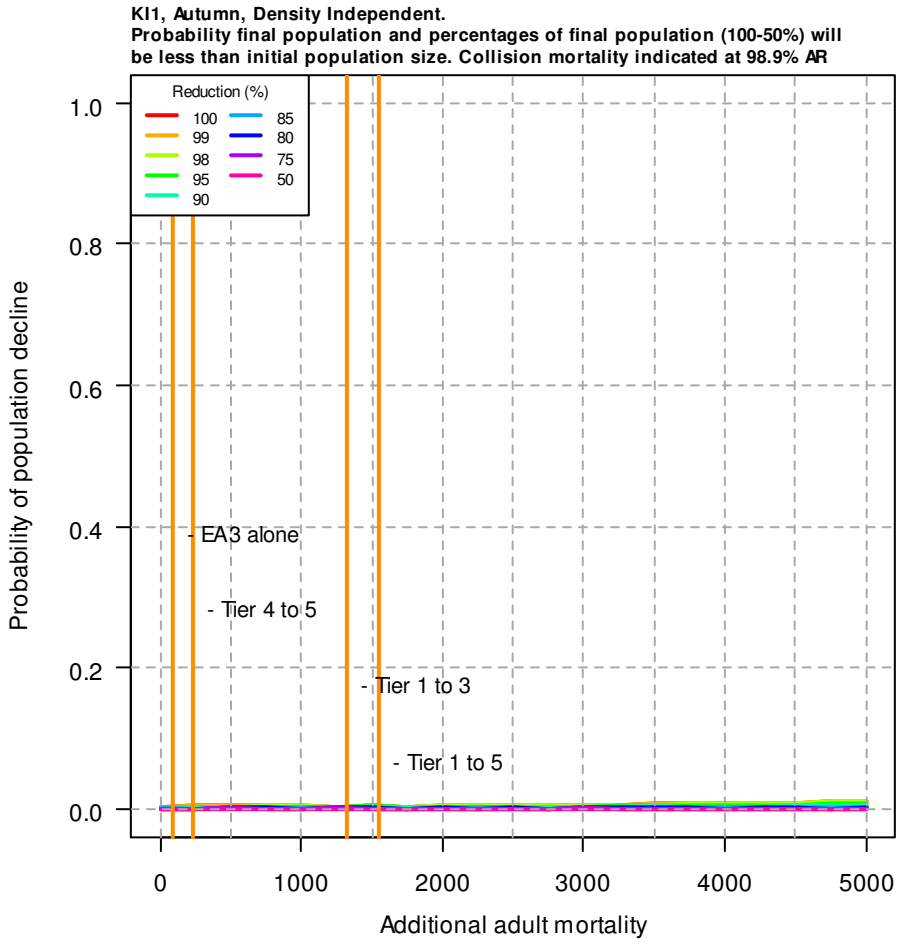

Figure 23 Kittiwake - Autumn: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

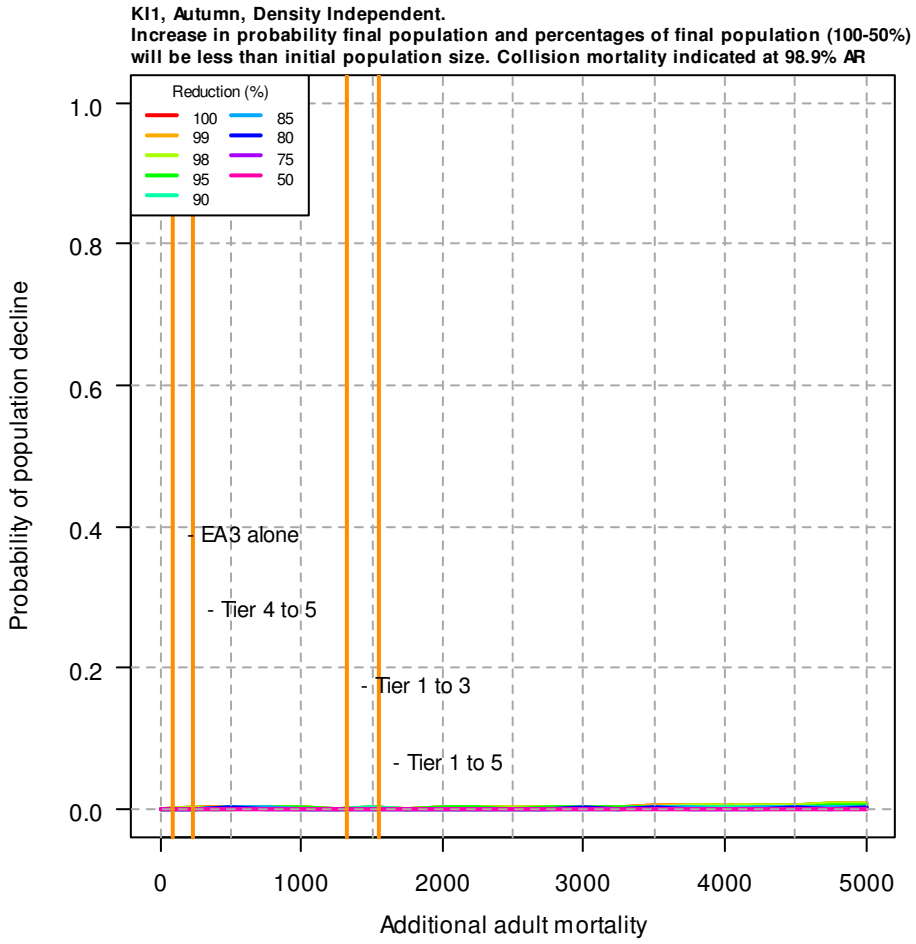

Figure 24 Kittiwake - Autumn: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

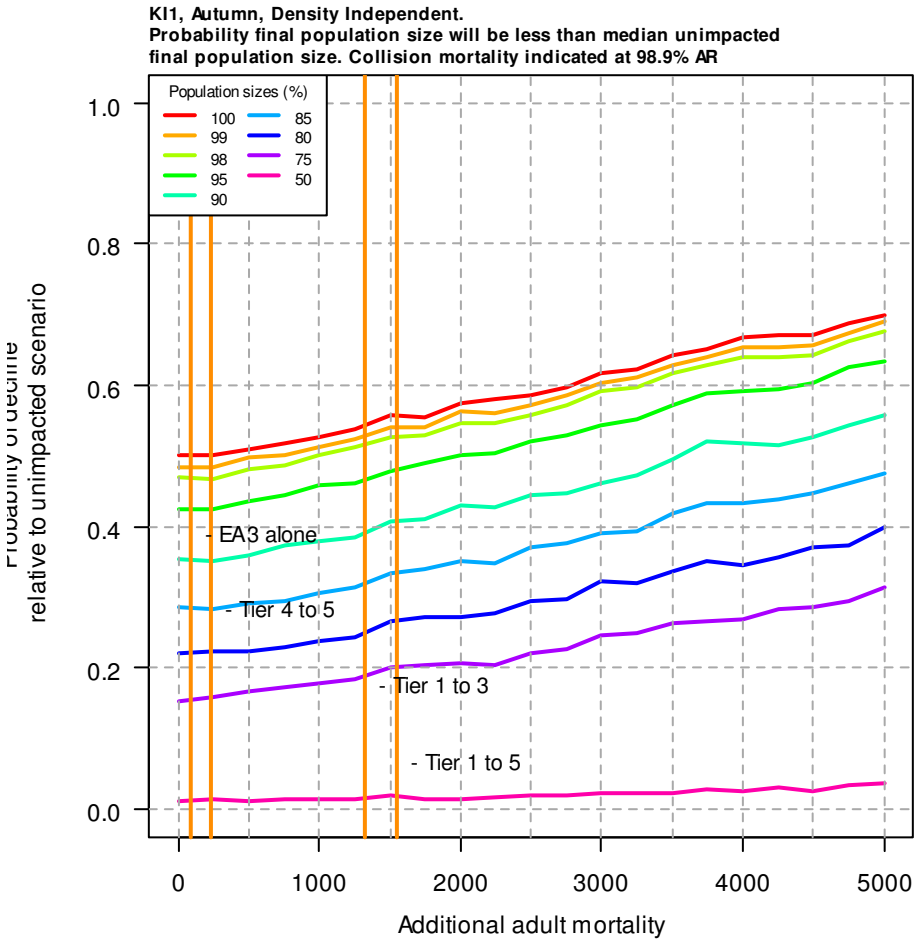

Figure 25 Kittiwake - Autumn: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

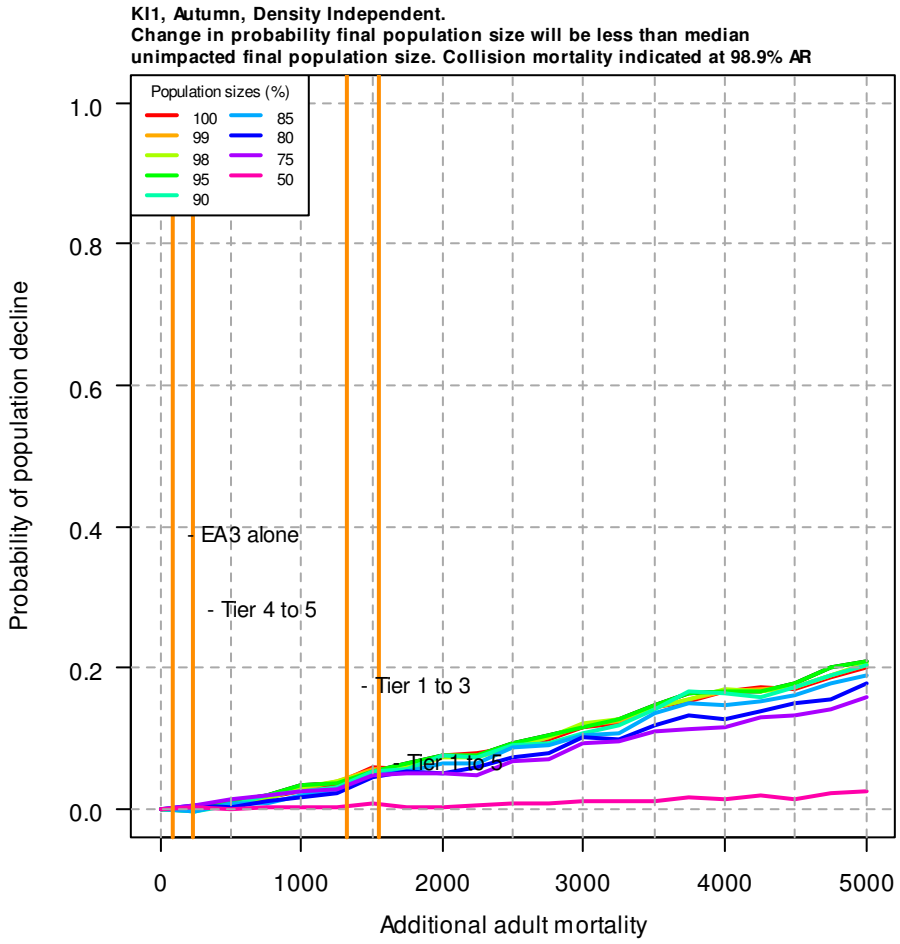

Figure 26 Kittiwake - Autumn: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

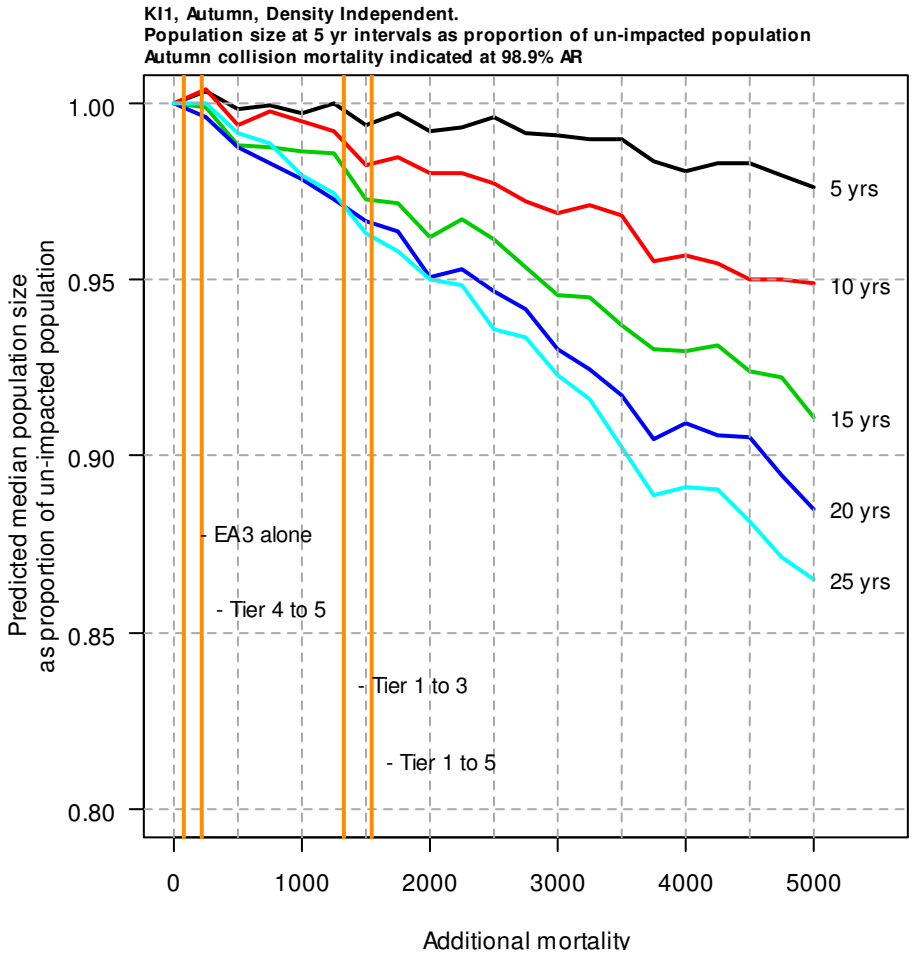

Figure 27 Kittiwake - Autumn: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

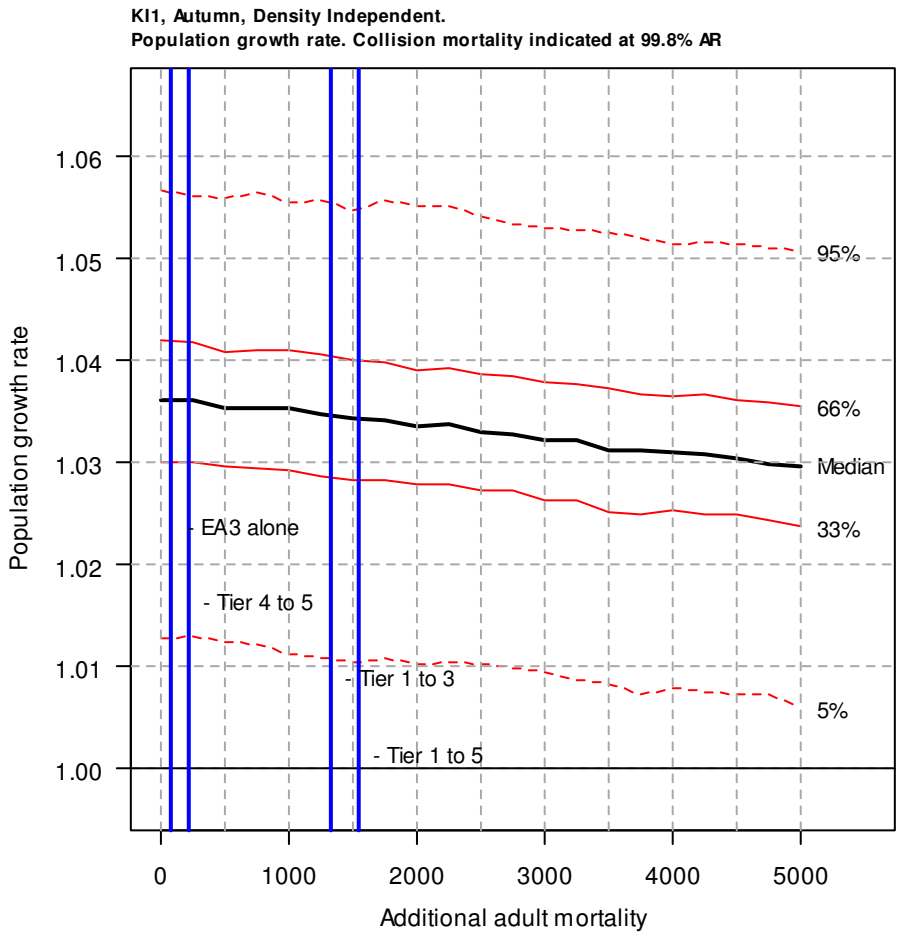

Figure 28 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

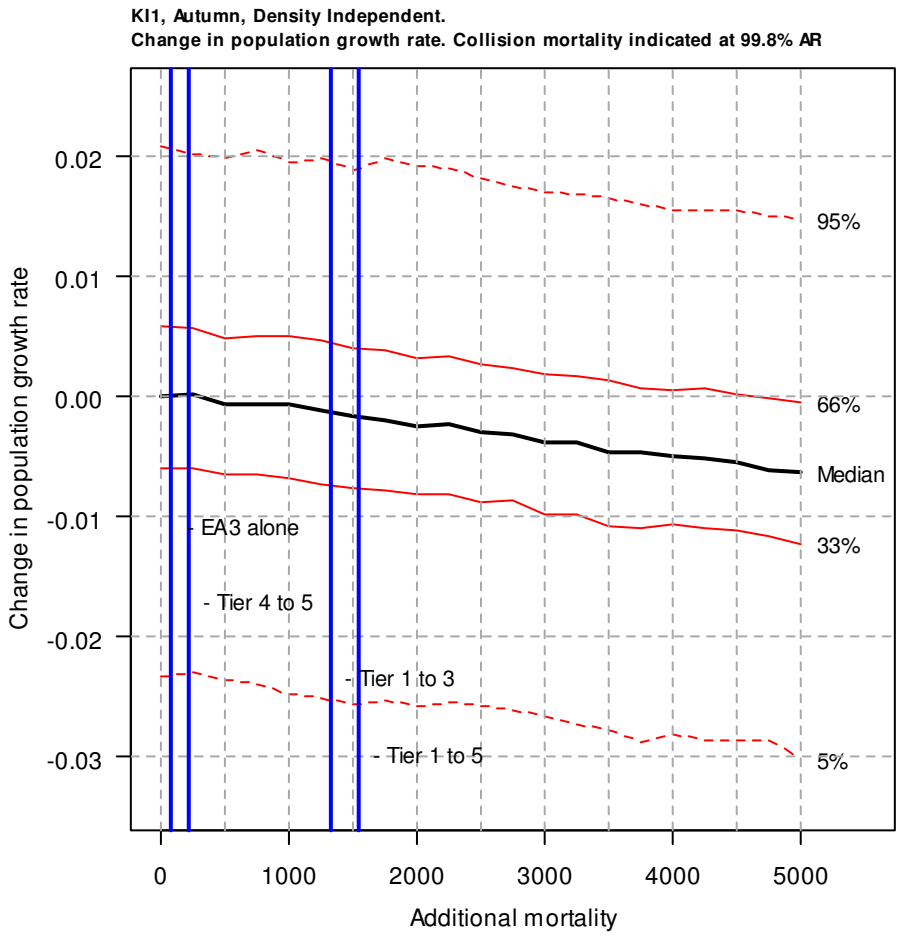

Figure 29 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

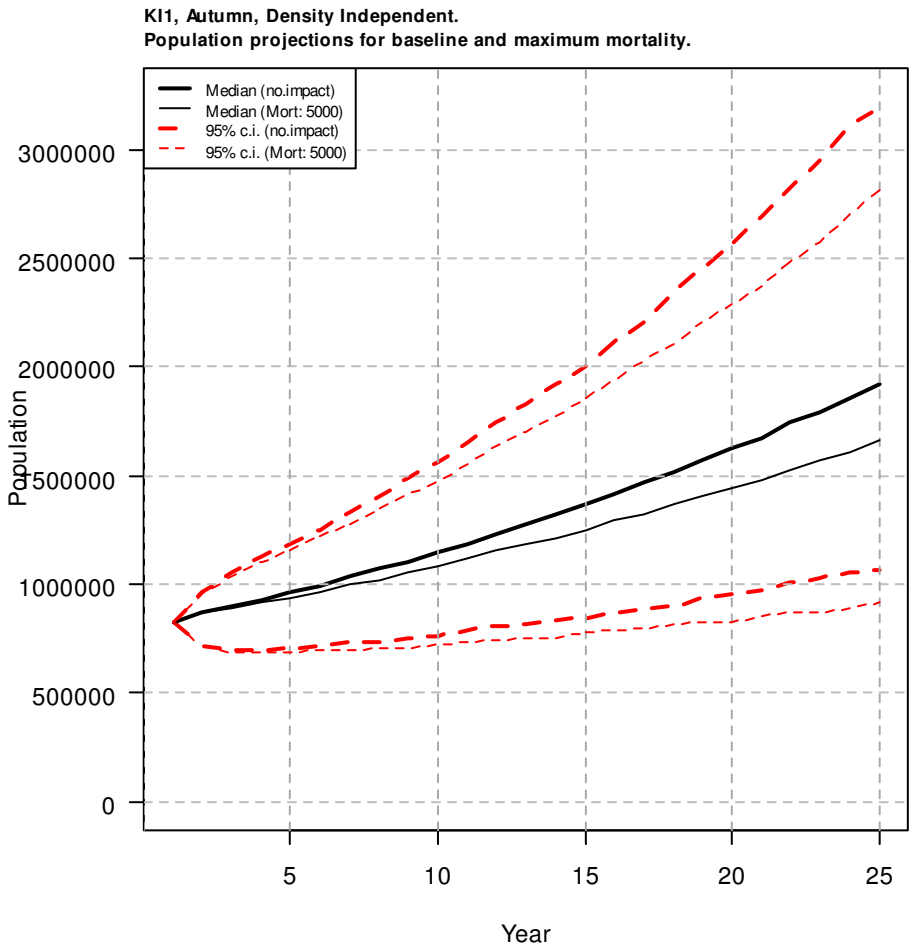

Figure 30 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

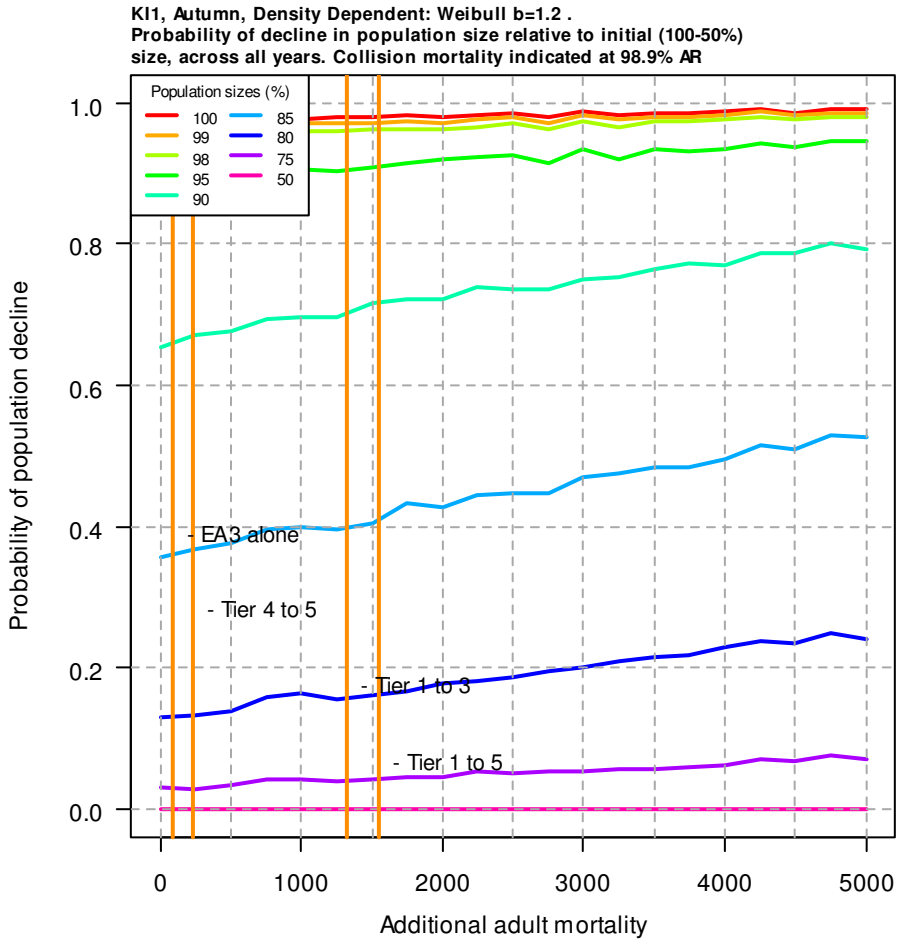

Figure 31 Kittiwake - Autumn: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

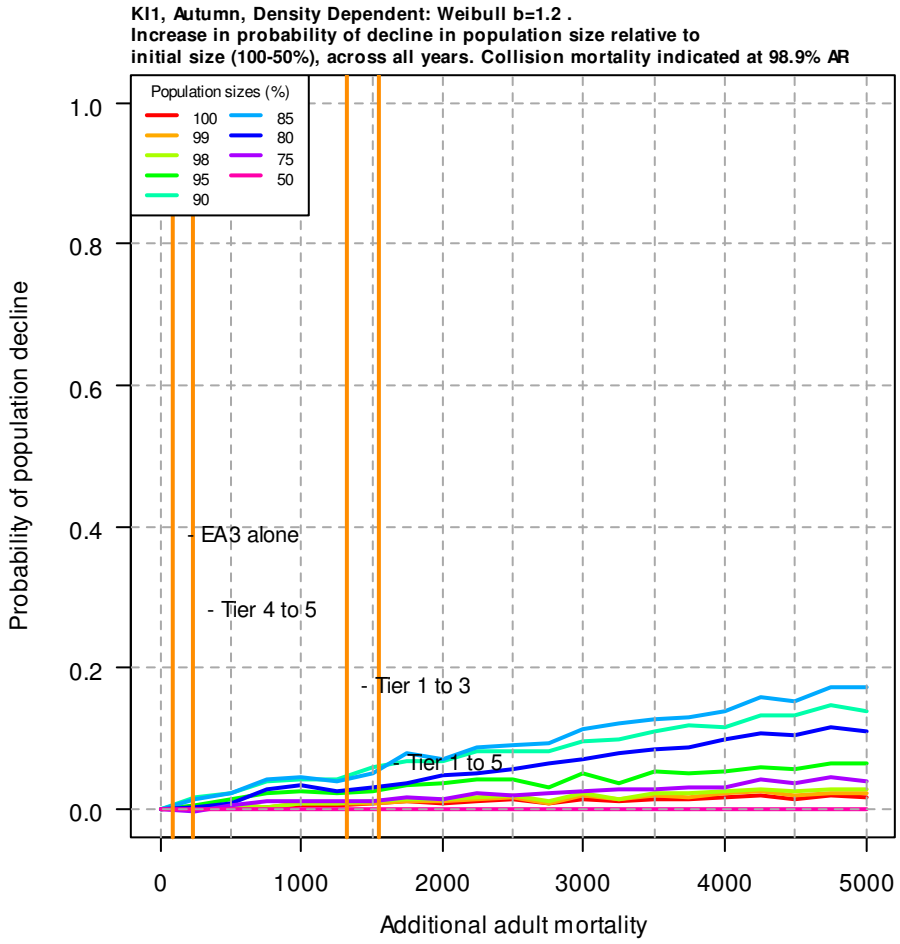

Figure 32 Kittiwake - Autumn: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

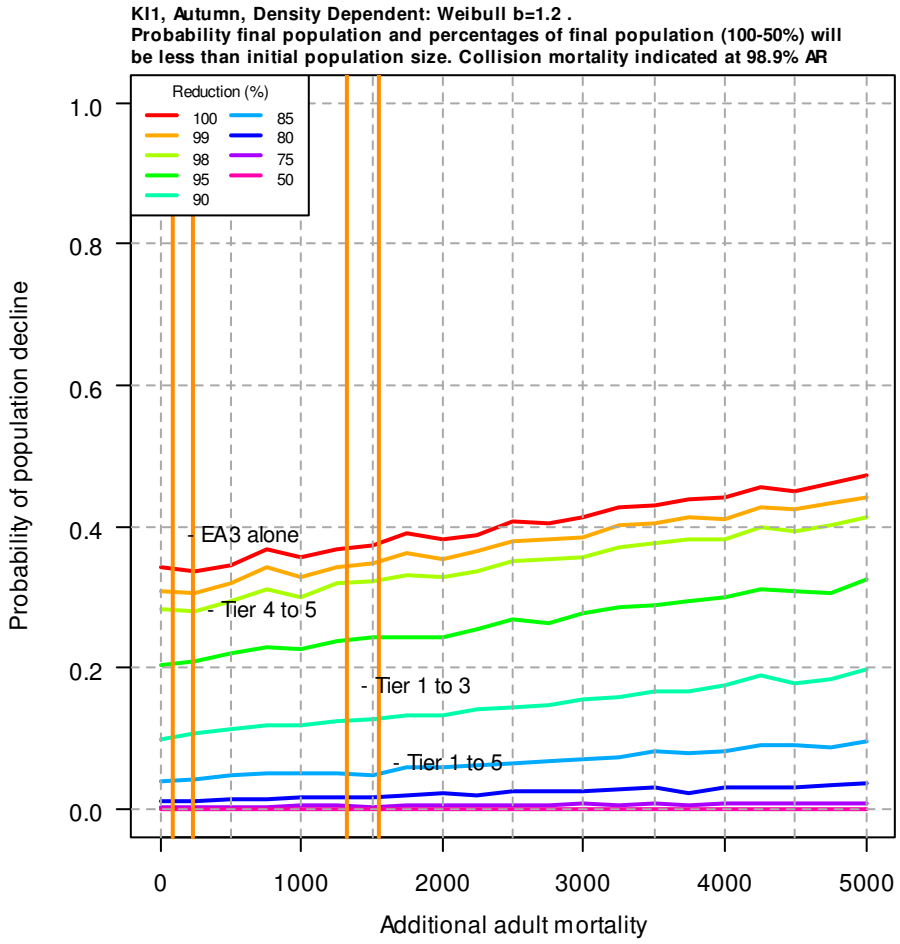

Figure 33 Kittiwake - Autumn: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

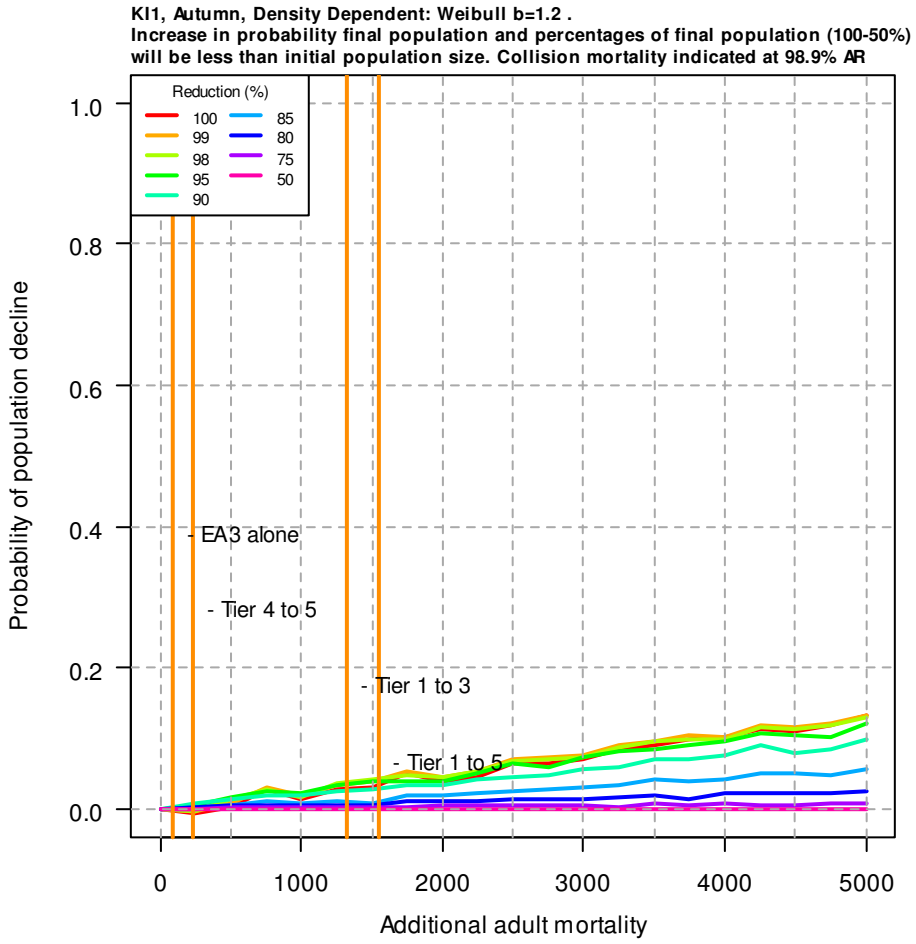

Figure 34 Kittiwake - Autumn: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

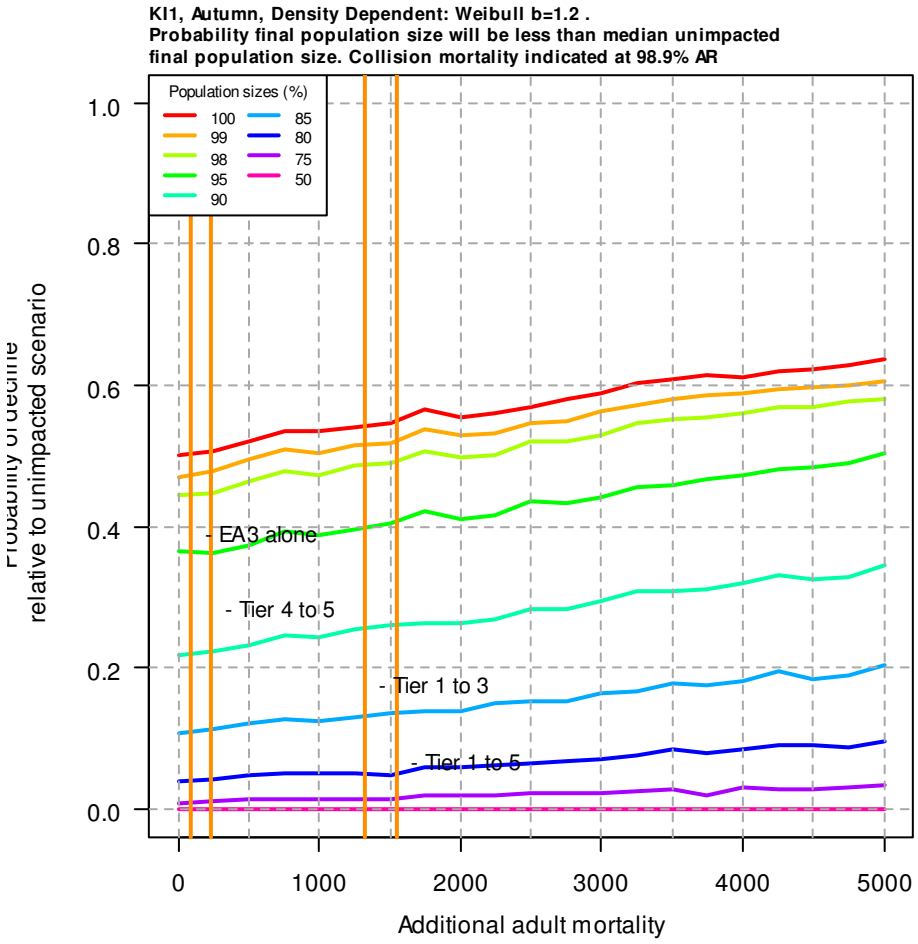

Figure 35 Kittiwake - Autumn: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

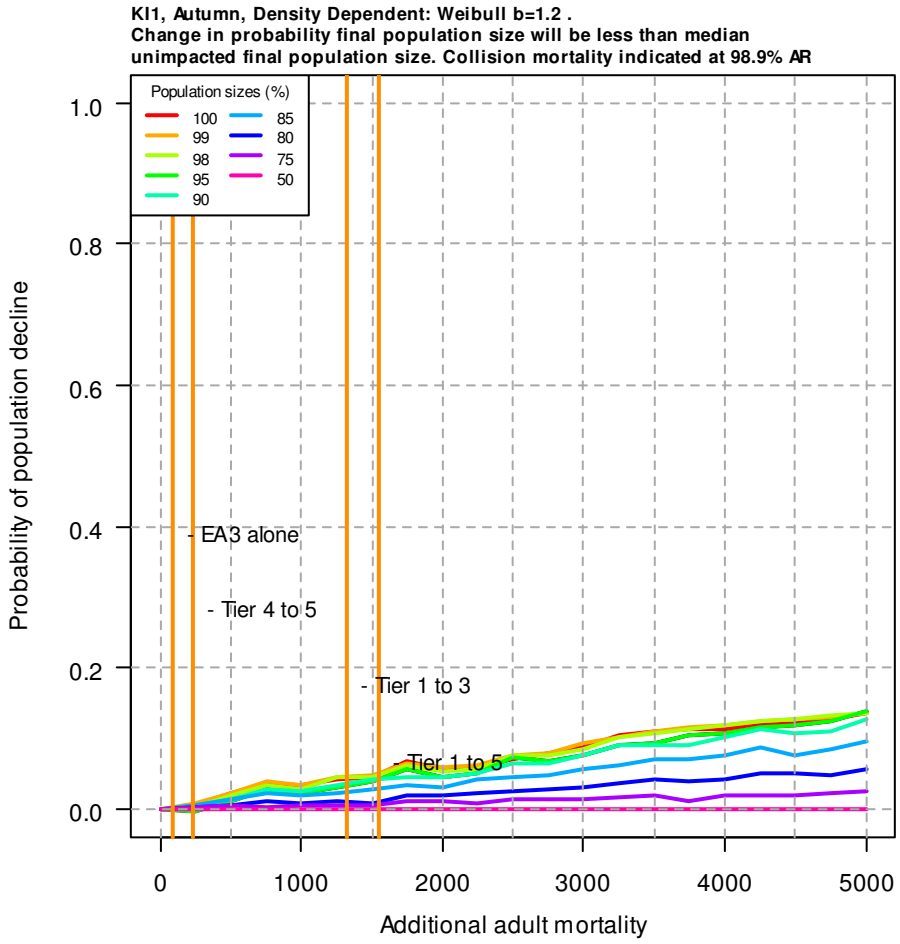

Figure 36 Kittiwake - Autumn: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

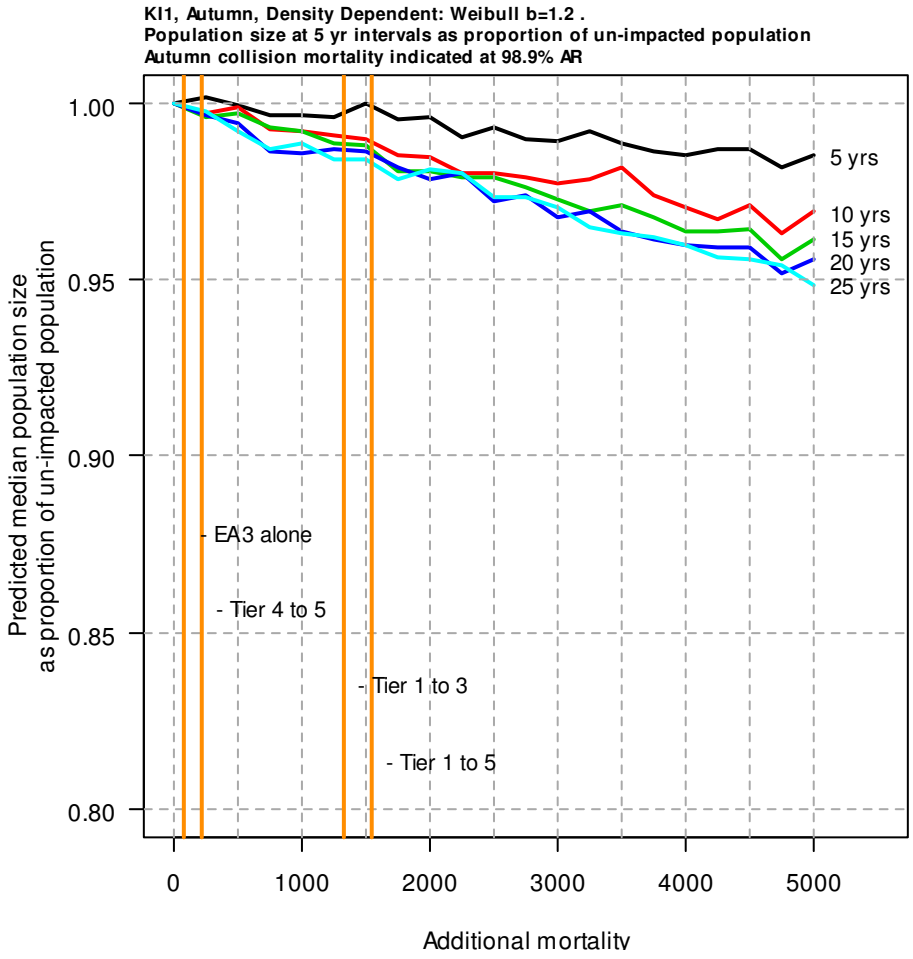

Figure 37 Kittiwake - Autumn: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

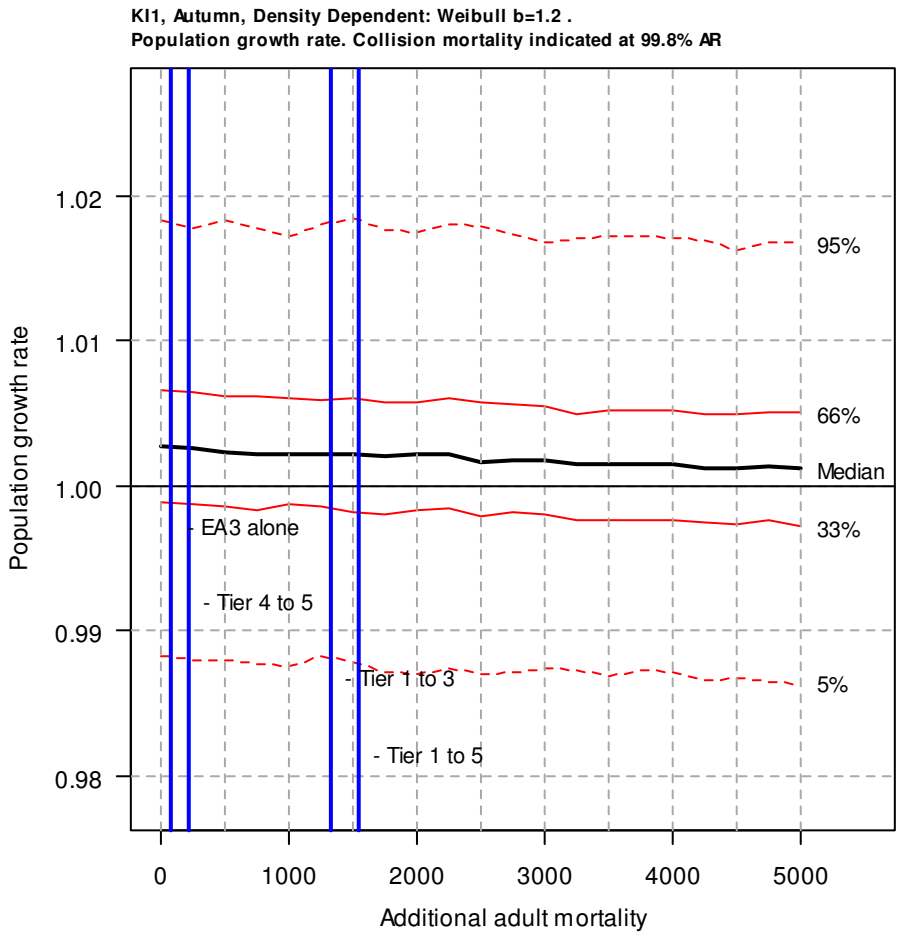

Figure 38 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

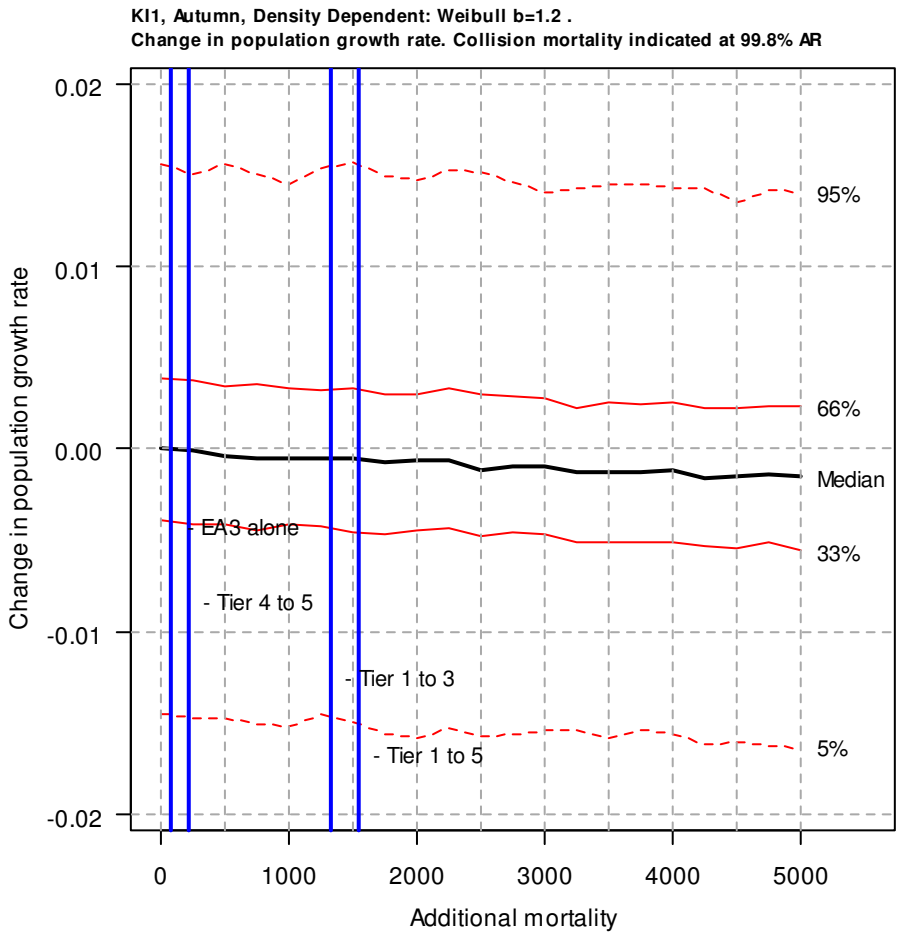

Figure 39 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

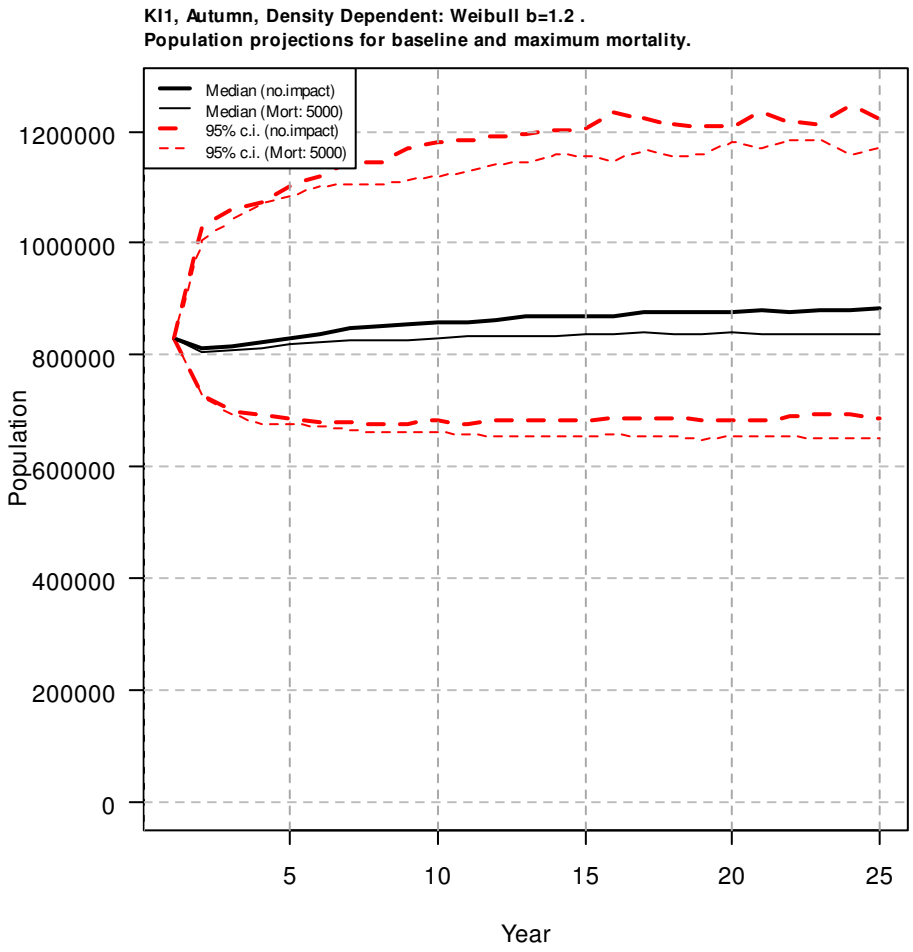

Figure 40 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

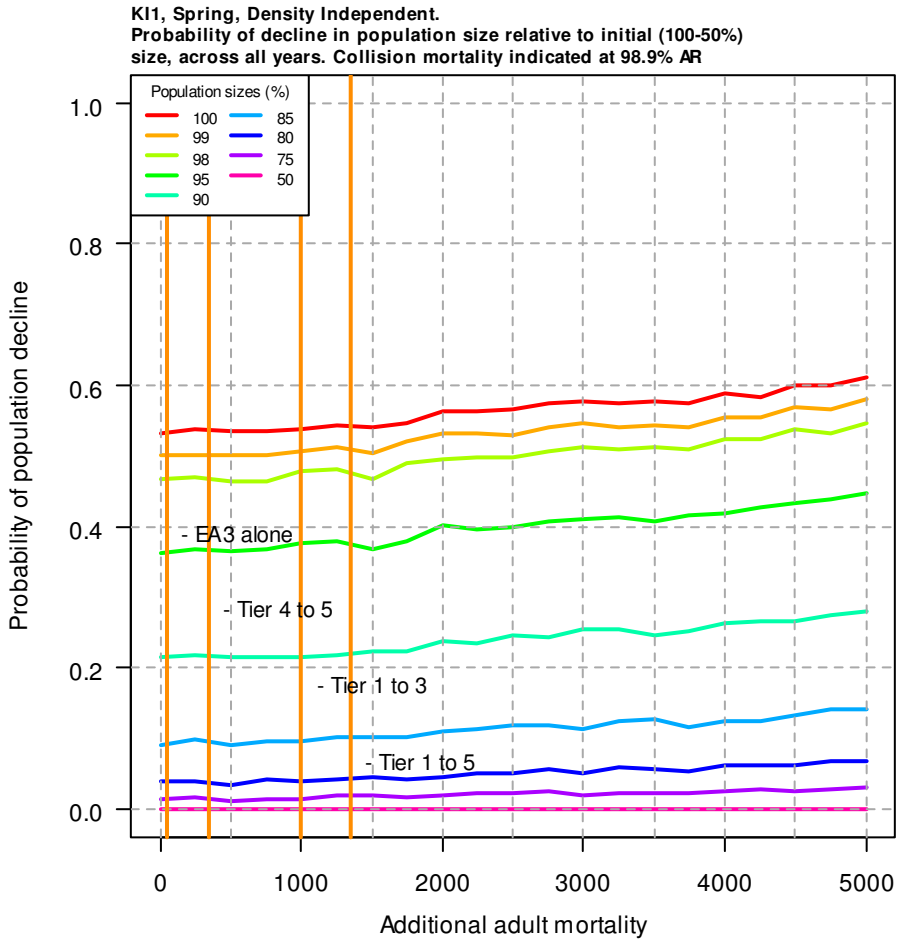

Figure 41 Kittiwake - Spring: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

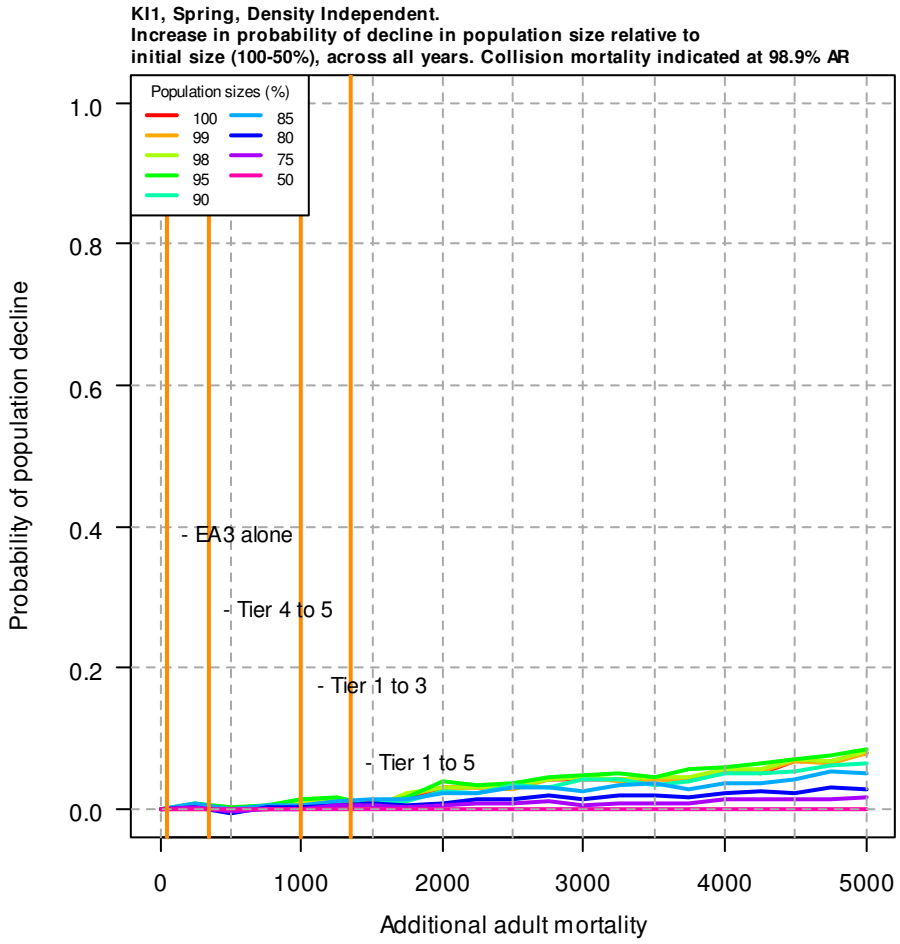

Figure 42 Kittiwake - Spring: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

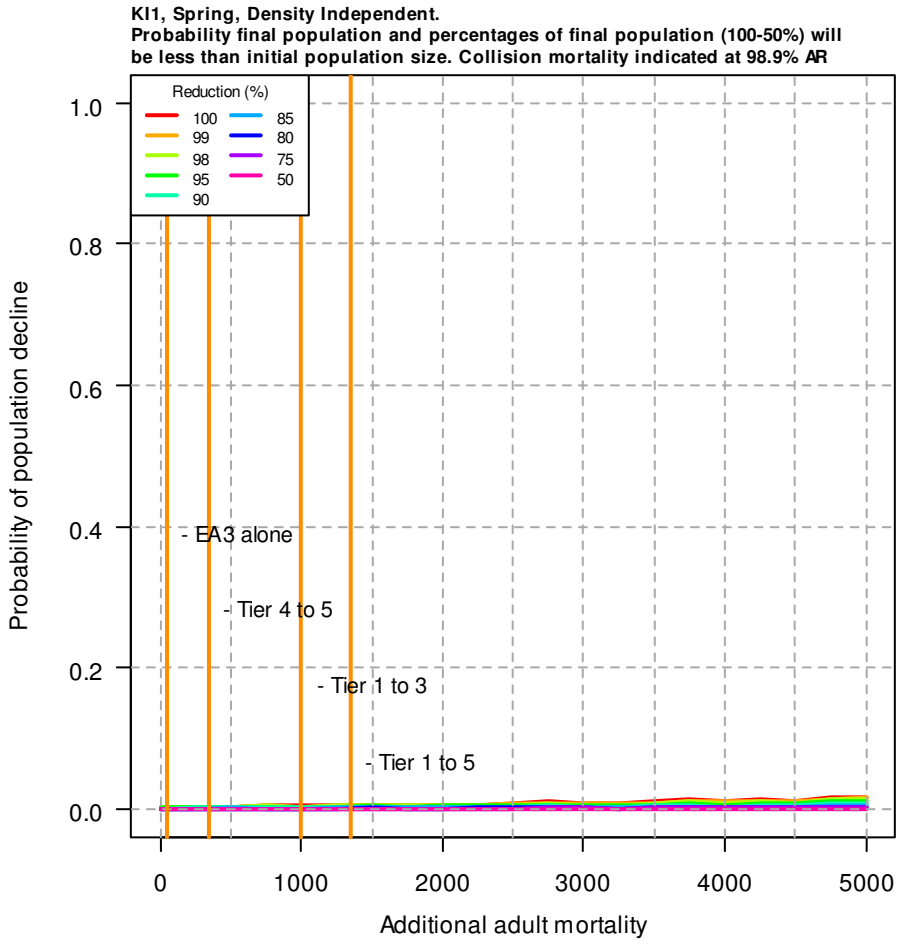

Figure 43 Kittiwake - Spring: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

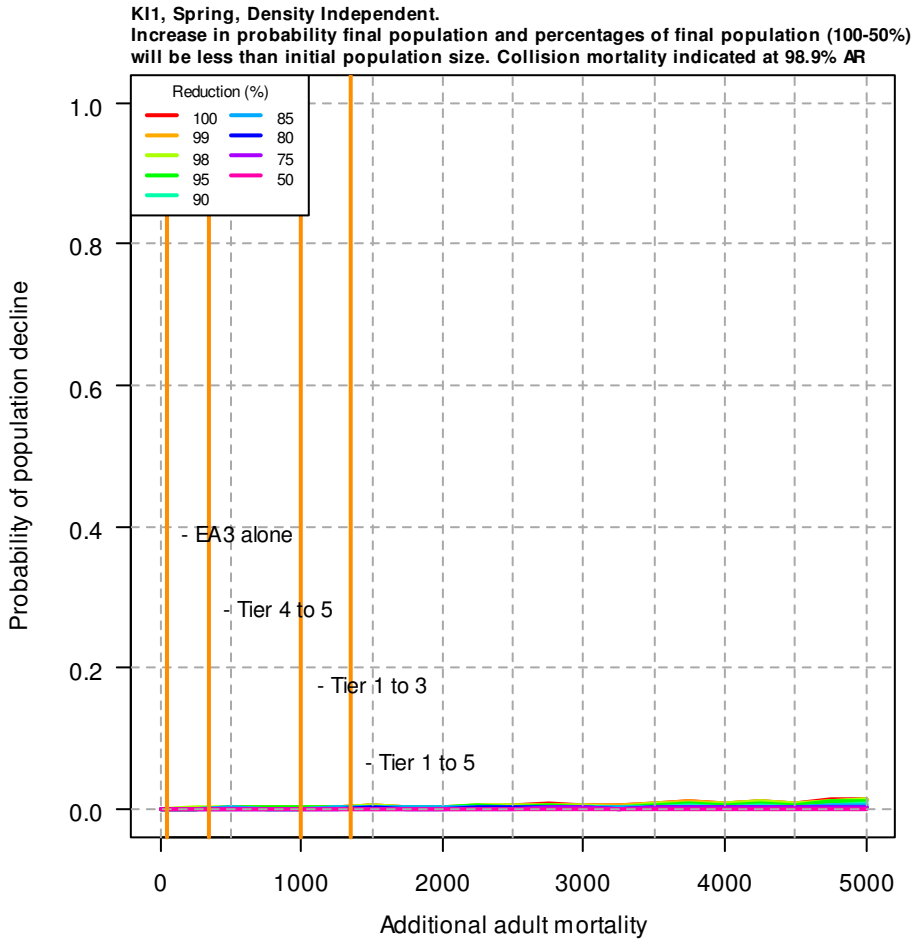

Figure 44 Kittiwake - Spring: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

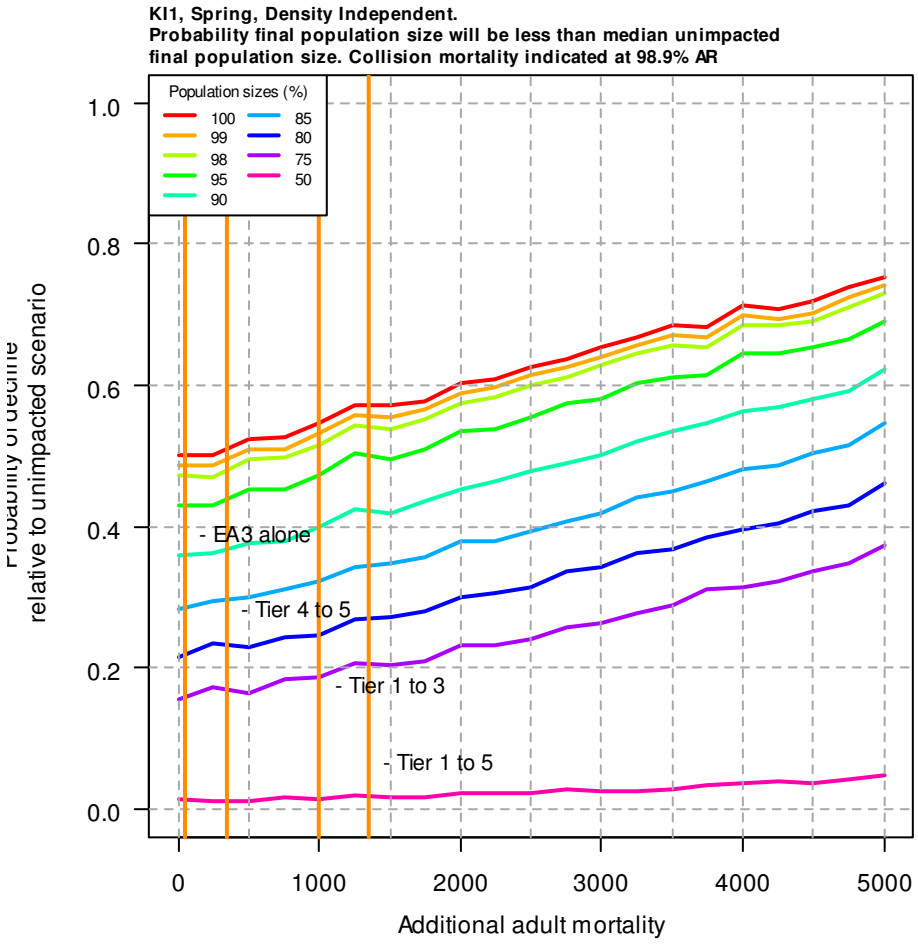

Figure 45 Kittiwake - Spring: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

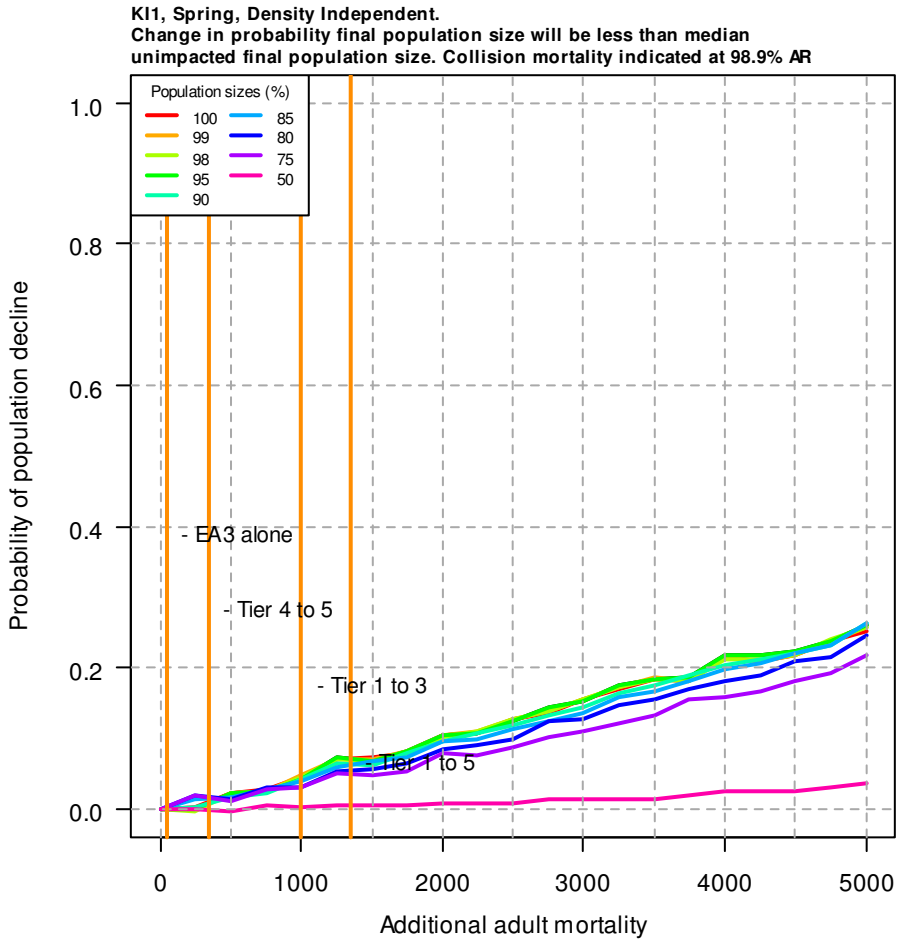

Figure 46 Kittiwake - Spring: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

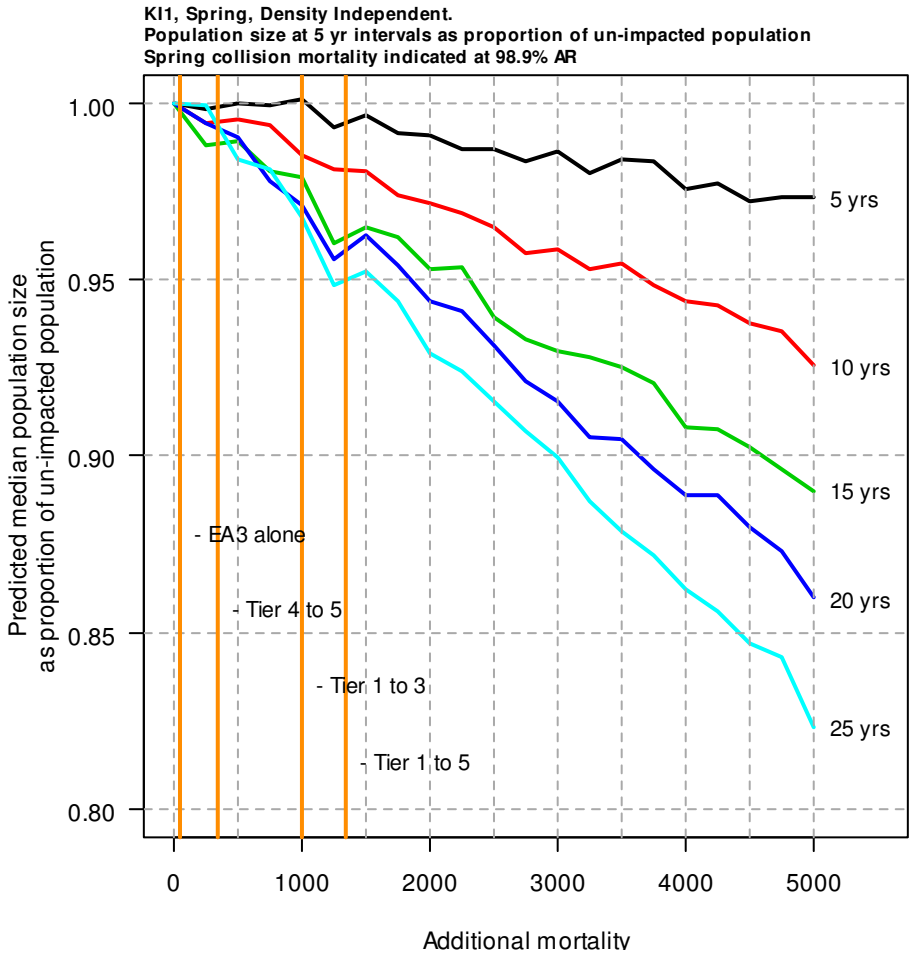

Figure 47 Kittiwake - Spring: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

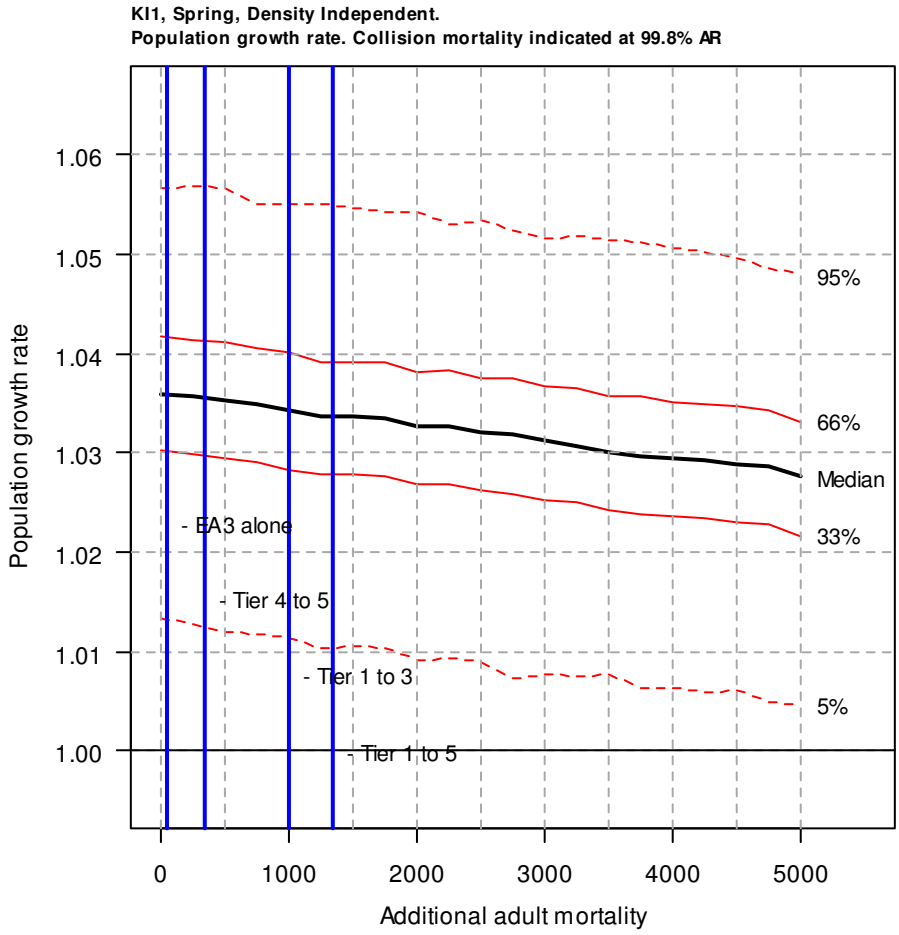

Figure 48 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

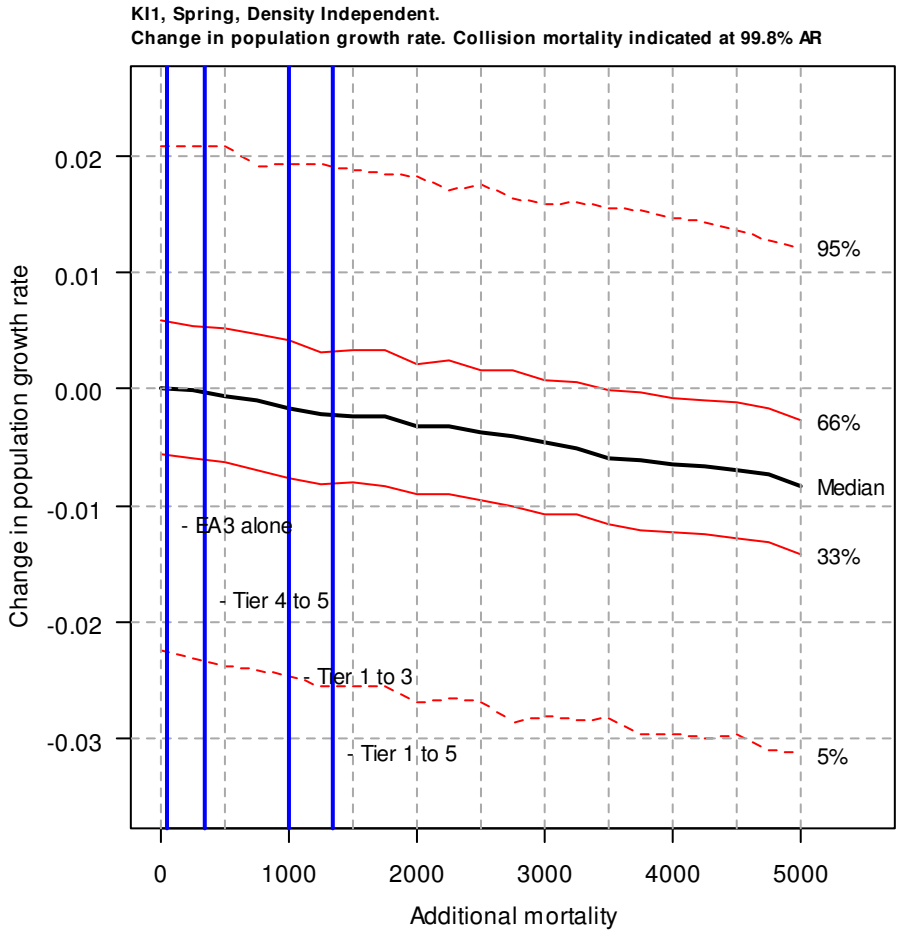

Figure 49 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

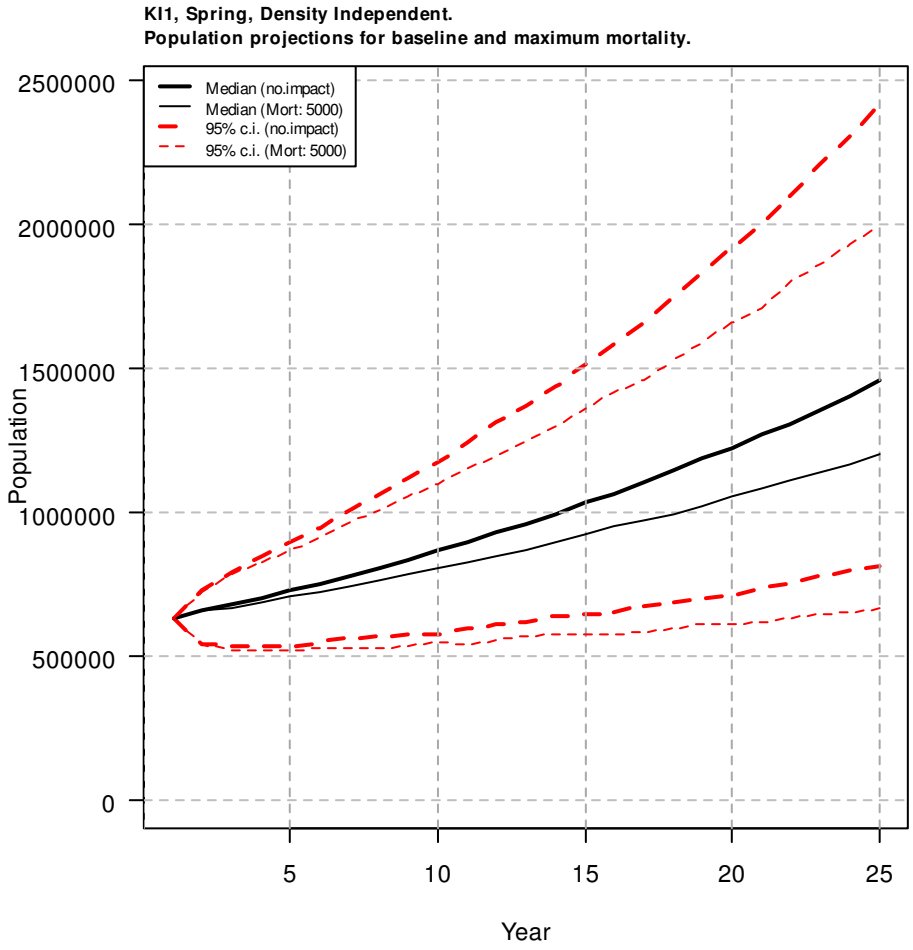

Figure 50 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

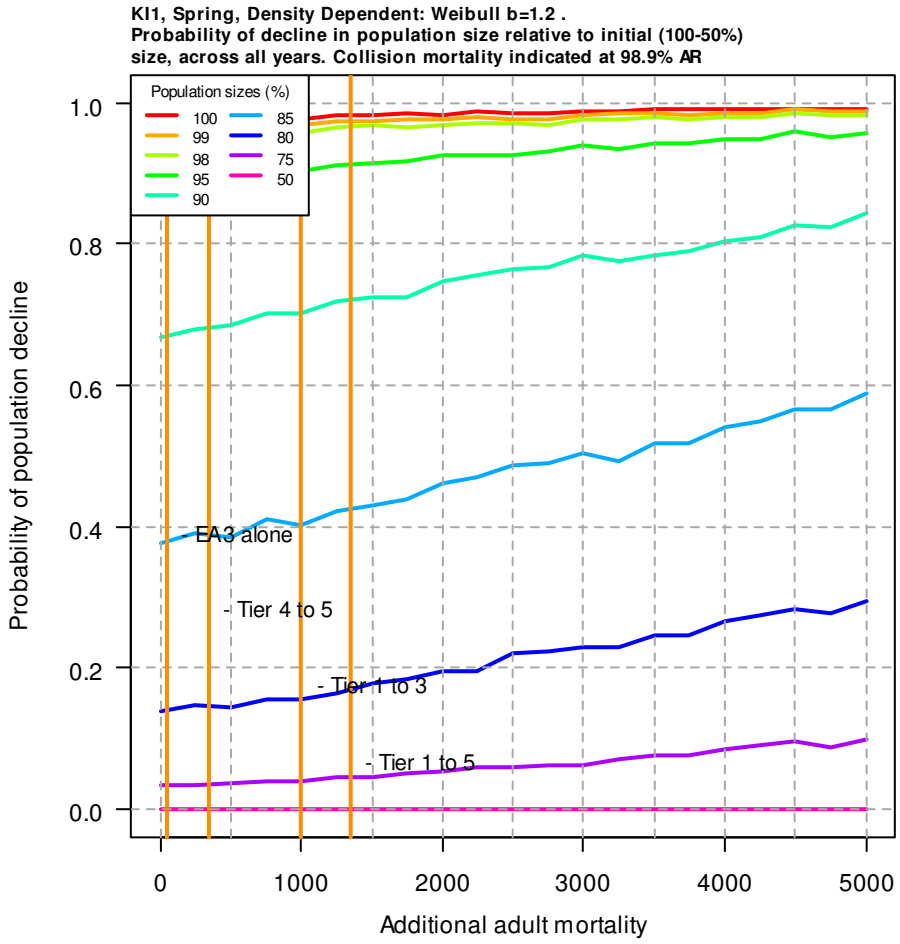

Figure 51 Kittiwake - Spring: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

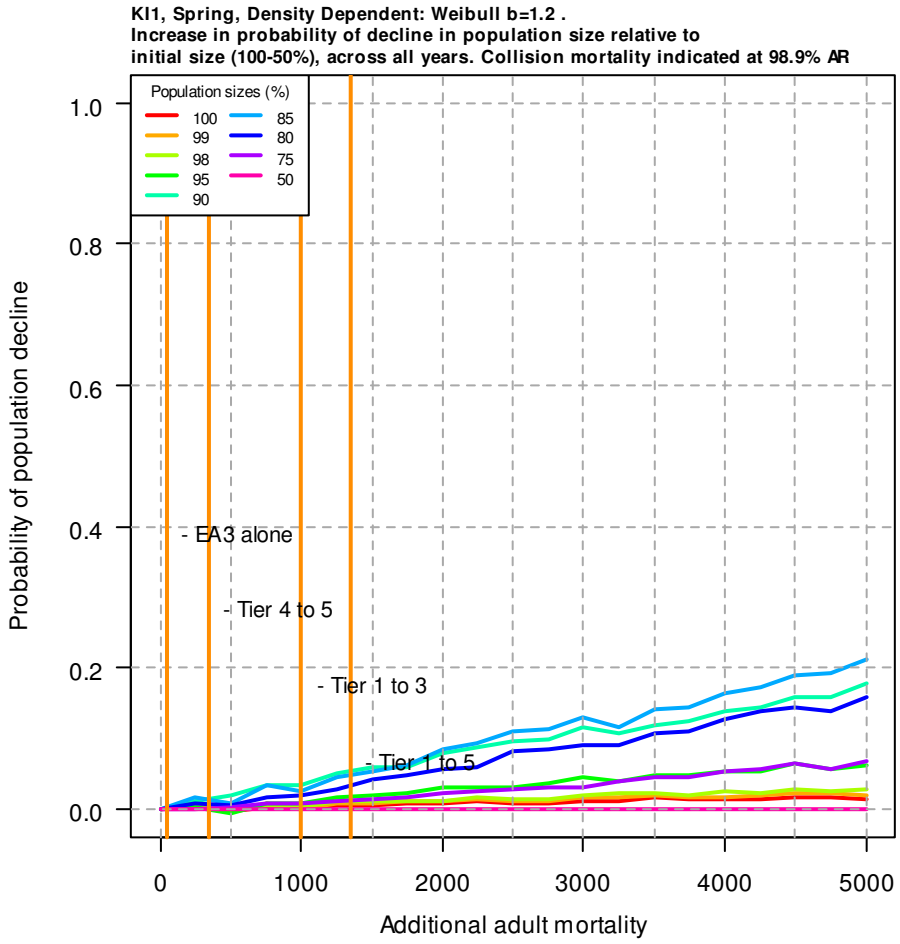

Figure 52 Kittiwake - Spring: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

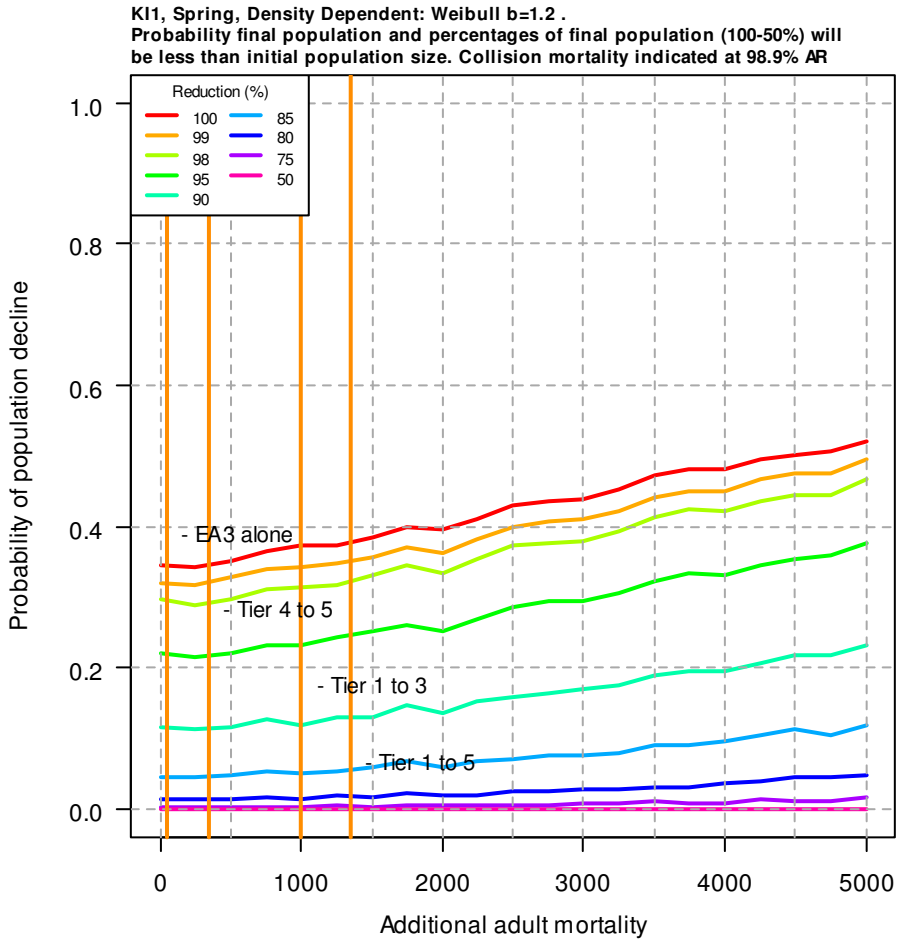

Figure 53 Kittiwake - Spring: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

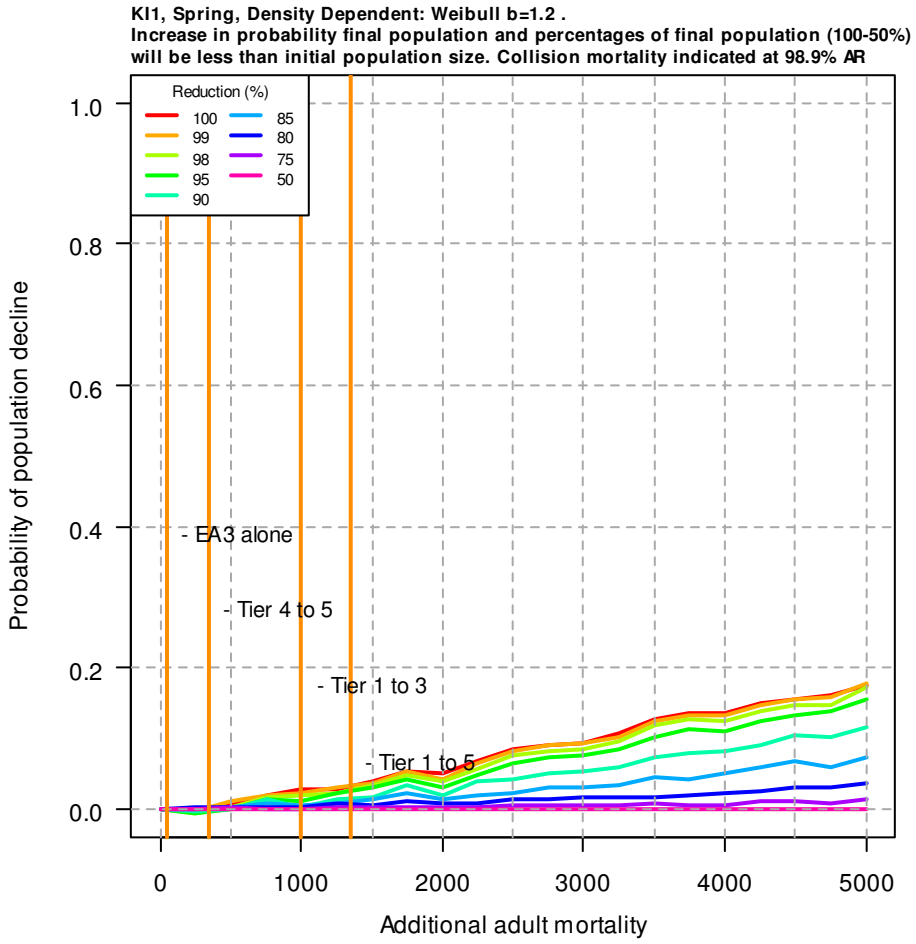

Figure 54 Kittiwake - Spring: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

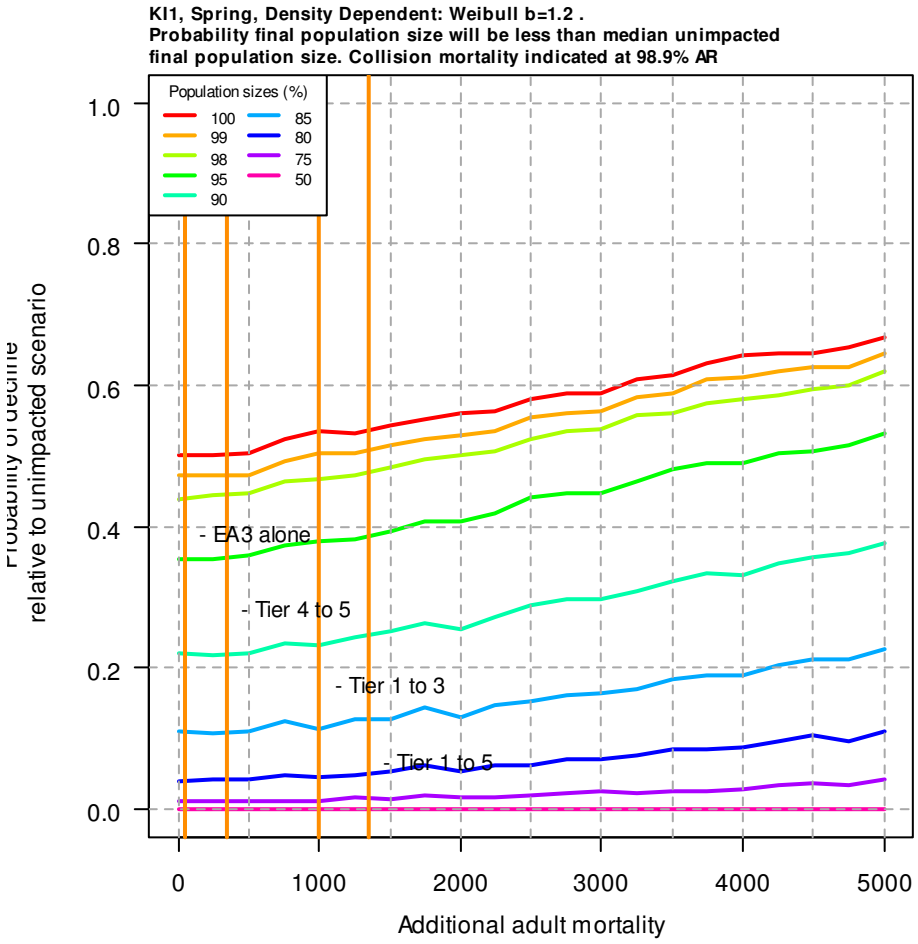

Figure 55 Kittiwake - Spring: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

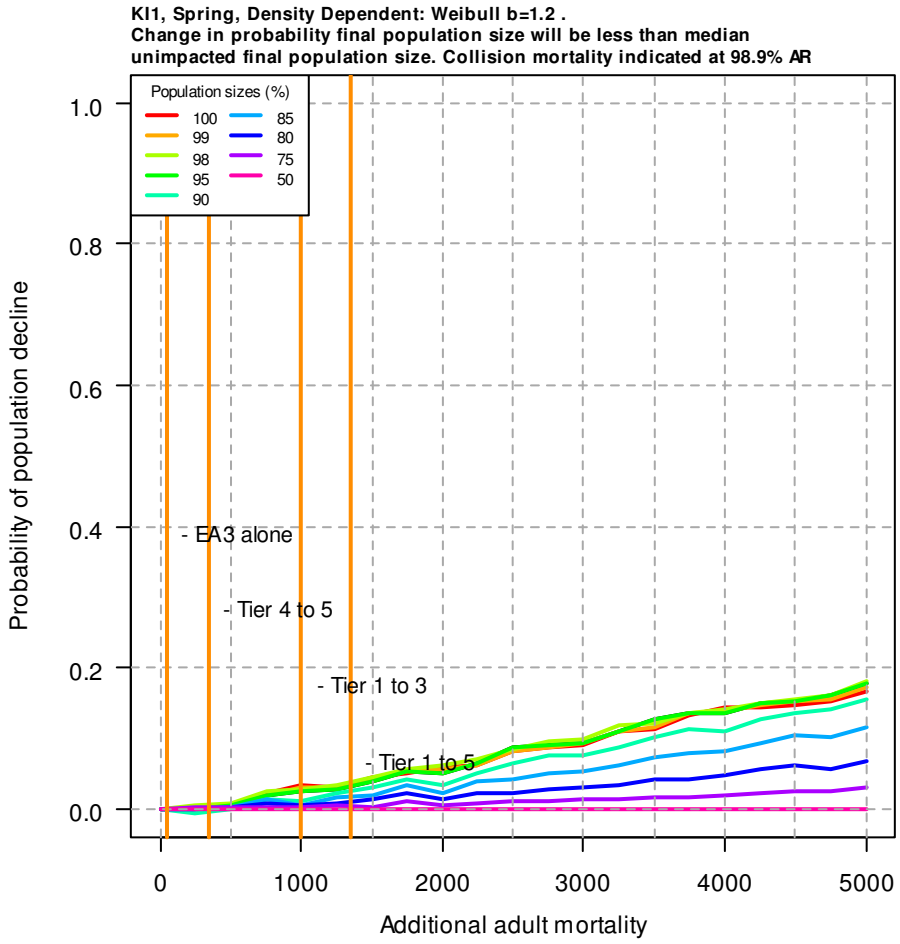

Figure 56 Kittiwake - Spring: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

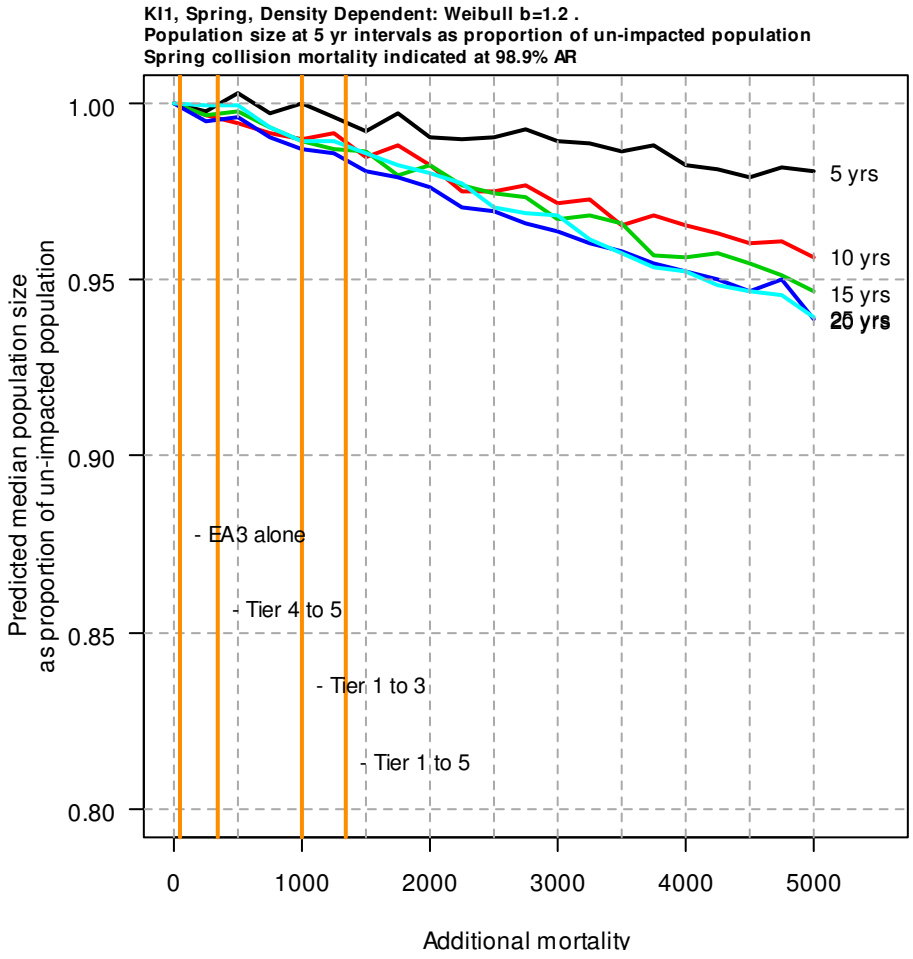

Figure 57 Kittiwake - Spring: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

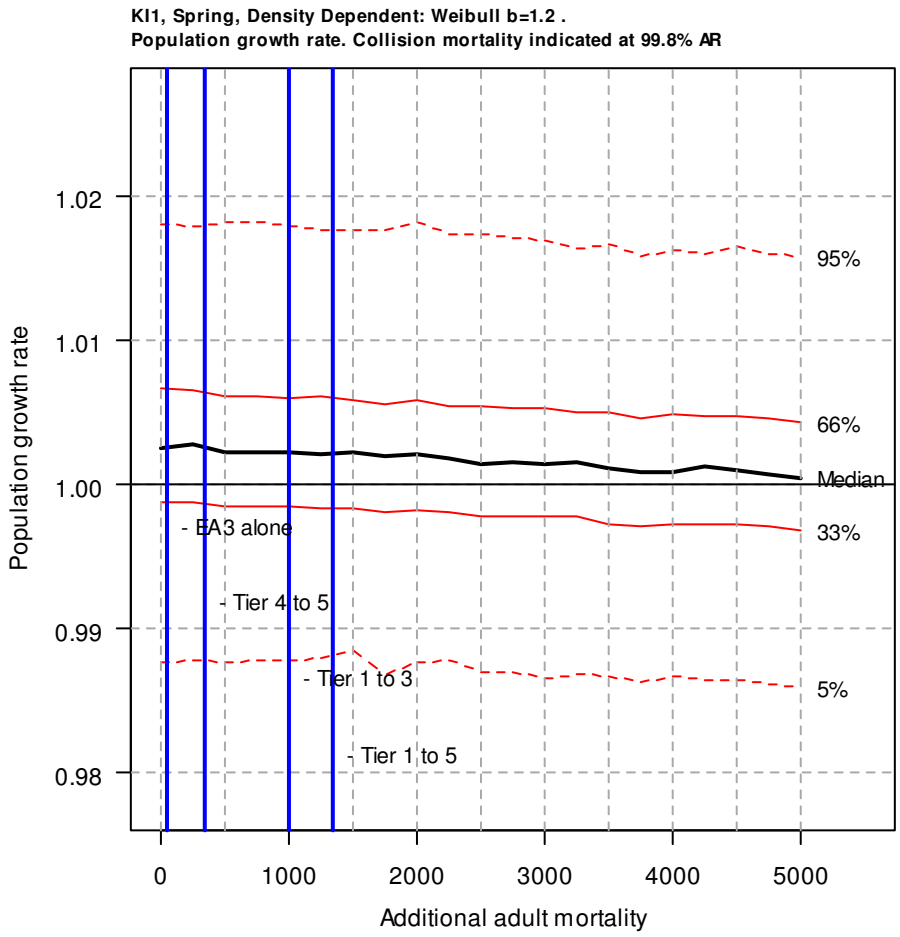

Figure 58 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

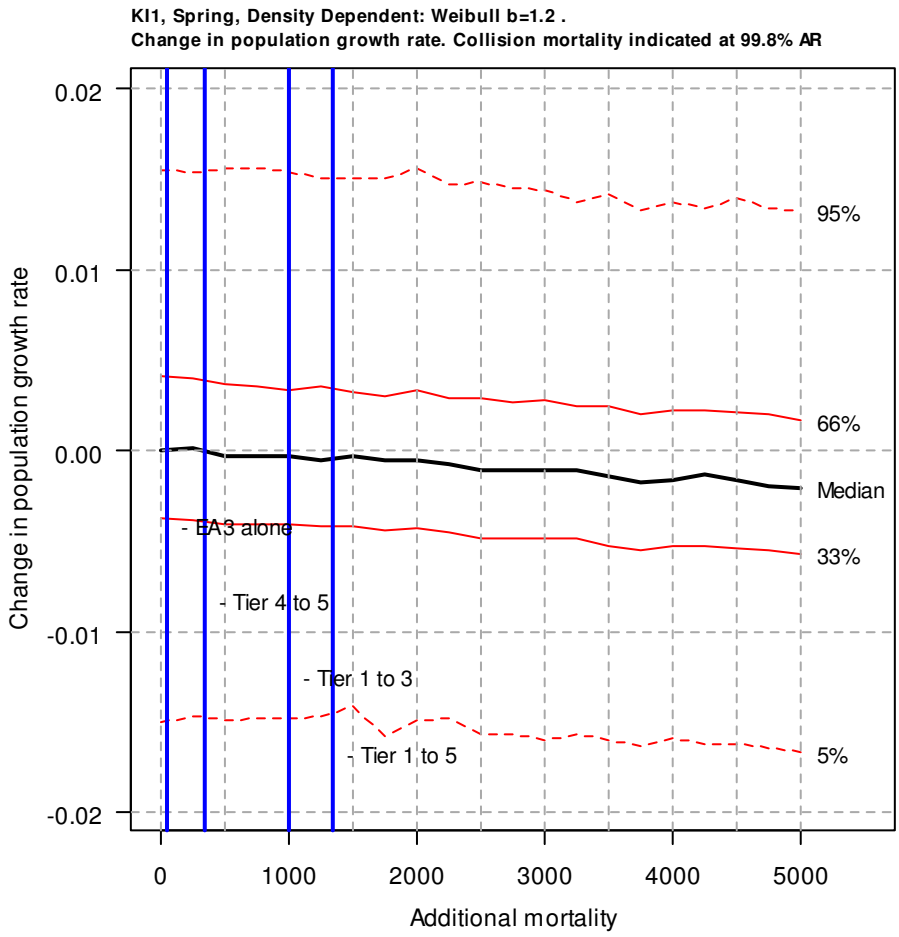

Figure 59 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

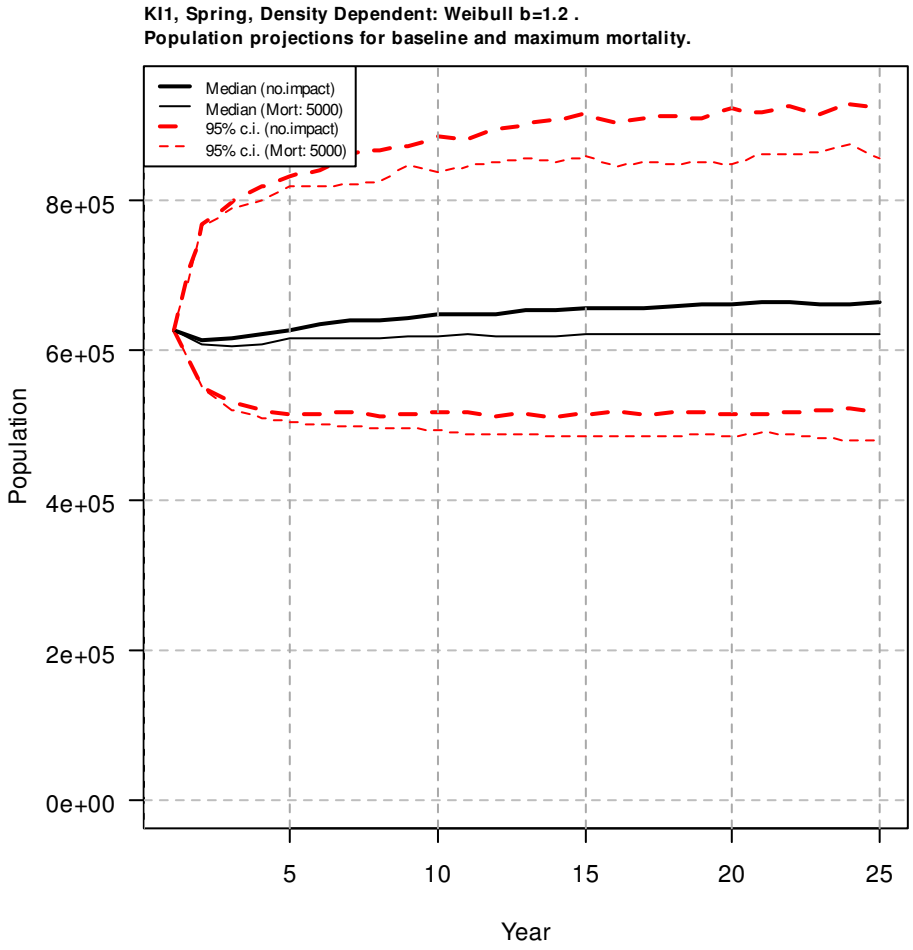

Figure 60 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

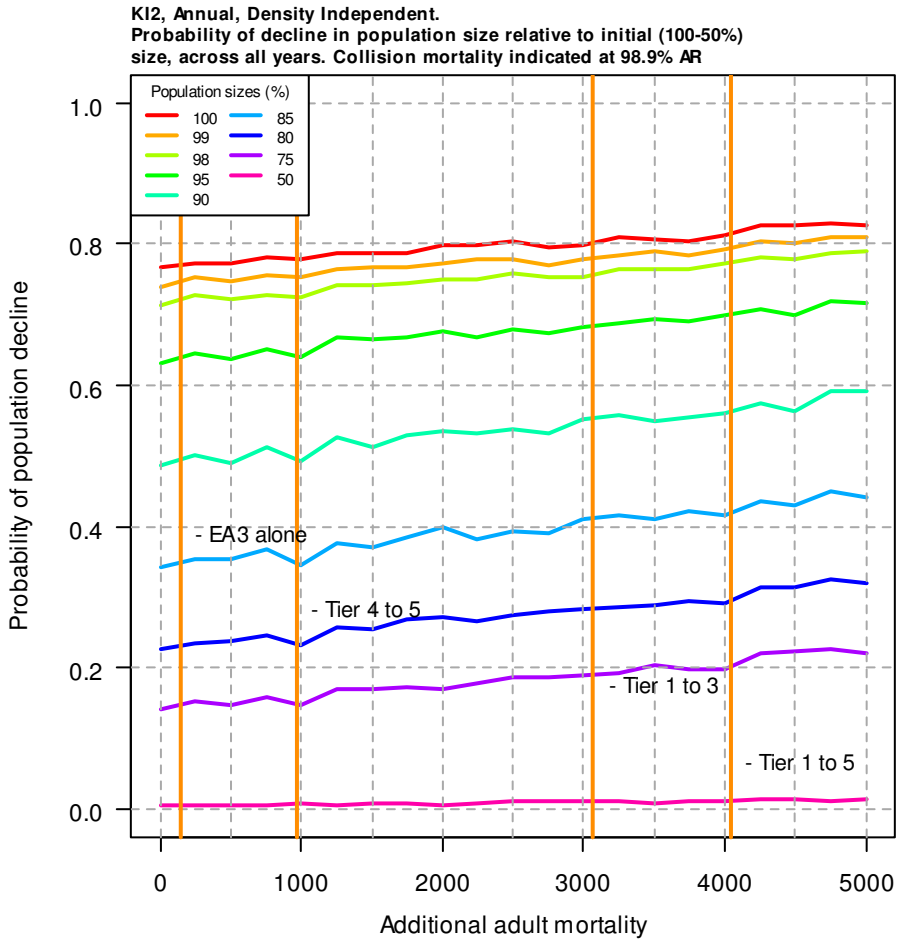

Figure 61 Kittiwake - Annual: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

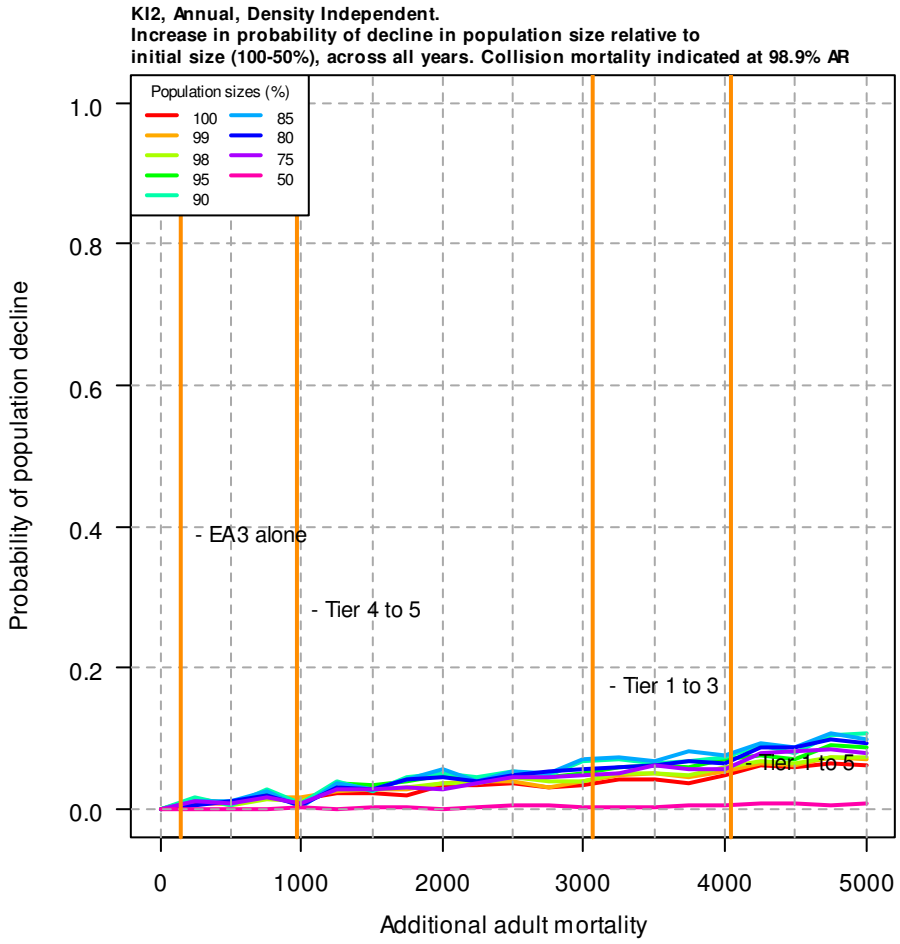

Figure 62 Kittiwake - Annual: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

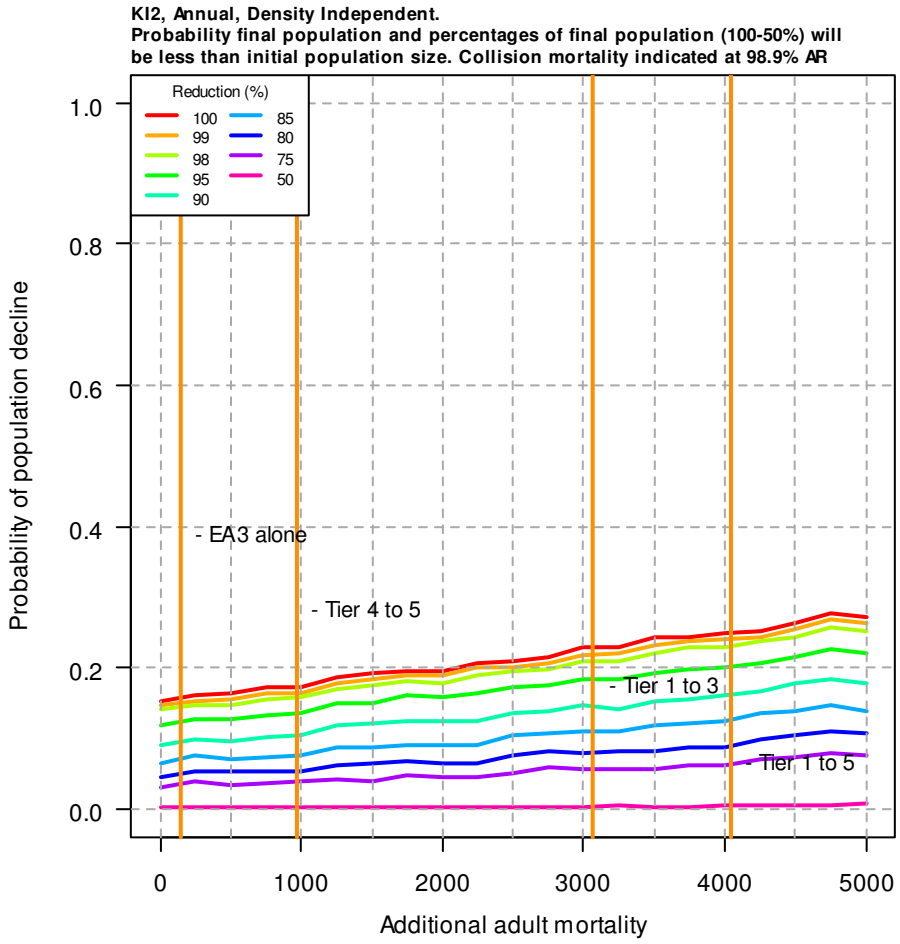

Figure 63 Kittiwake - Annual: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

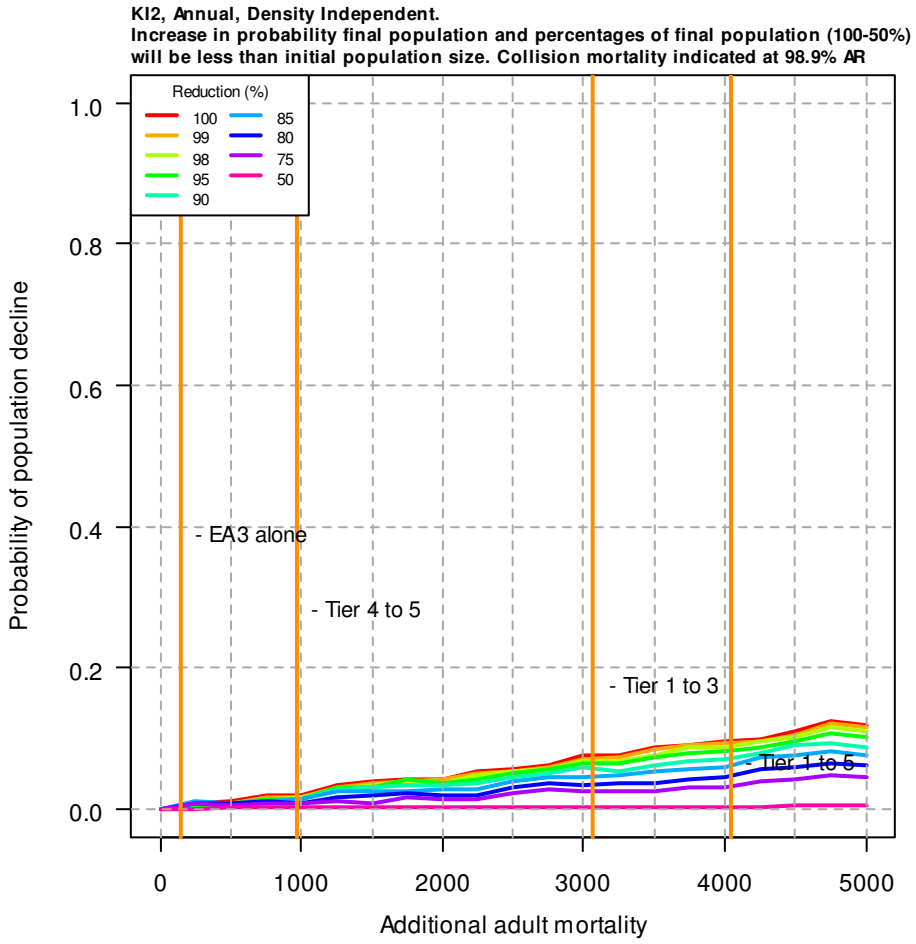

Figure 64 Kittiwake - Annual: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

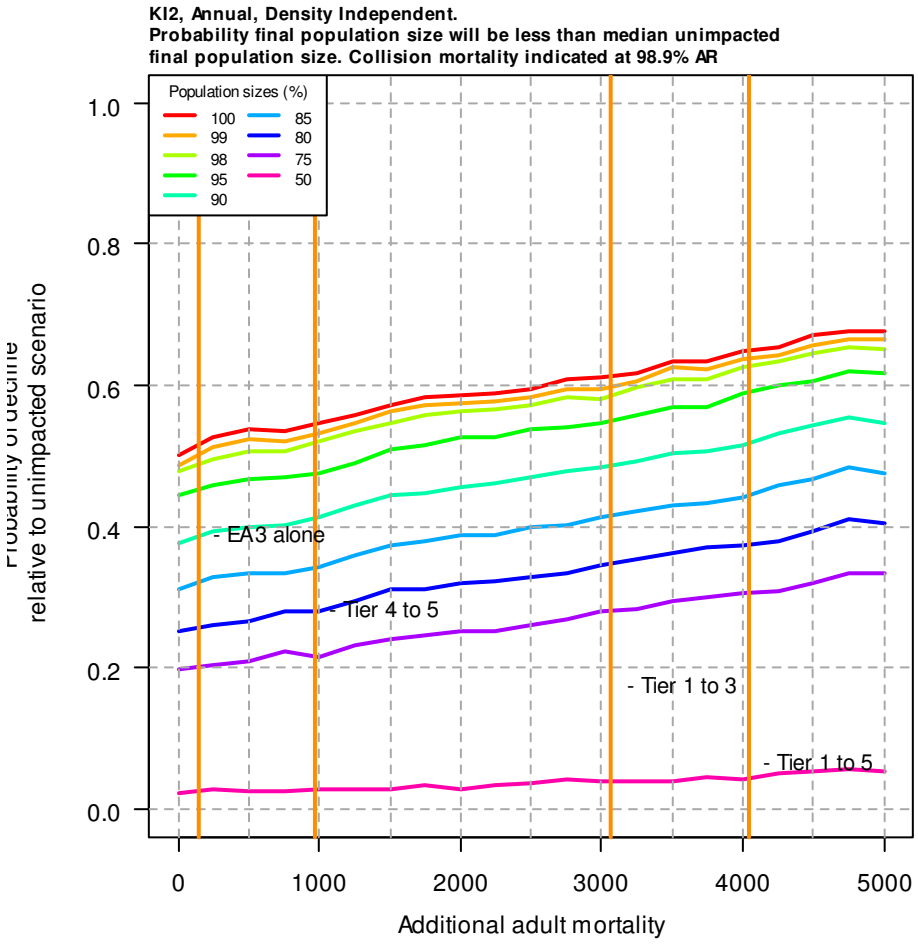

Figure 65 Kittiwake - Annual: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

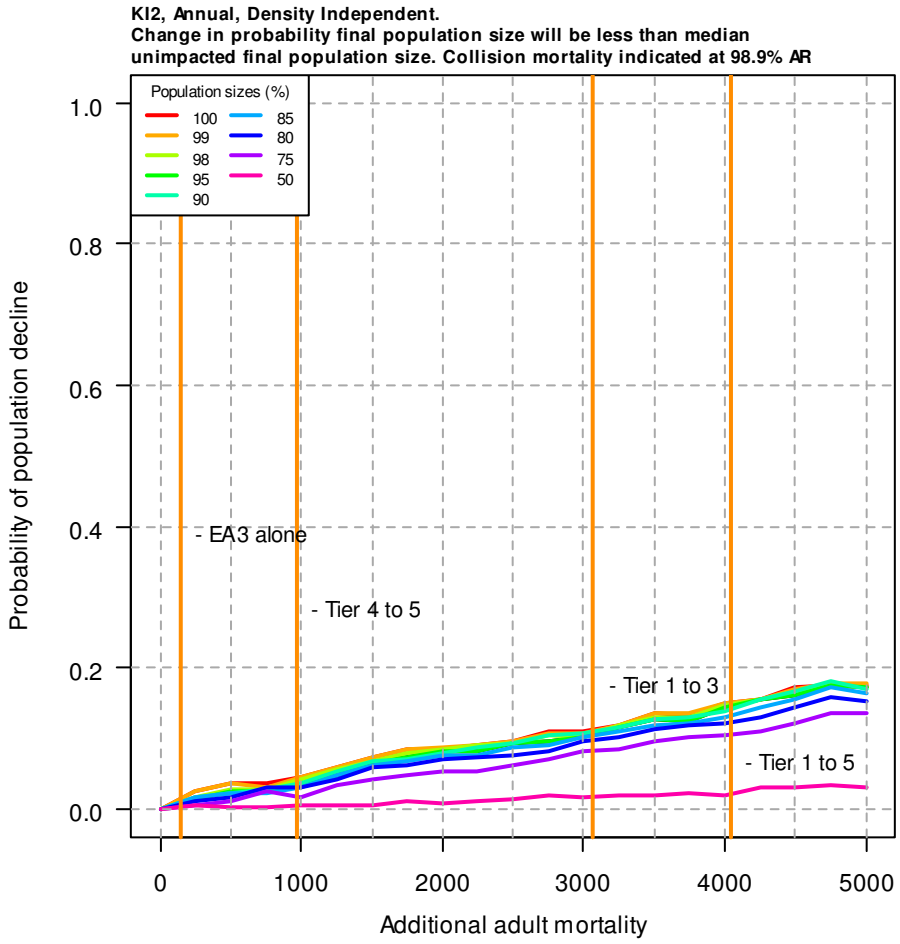

Figure 66 Kittiwake - Annual: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

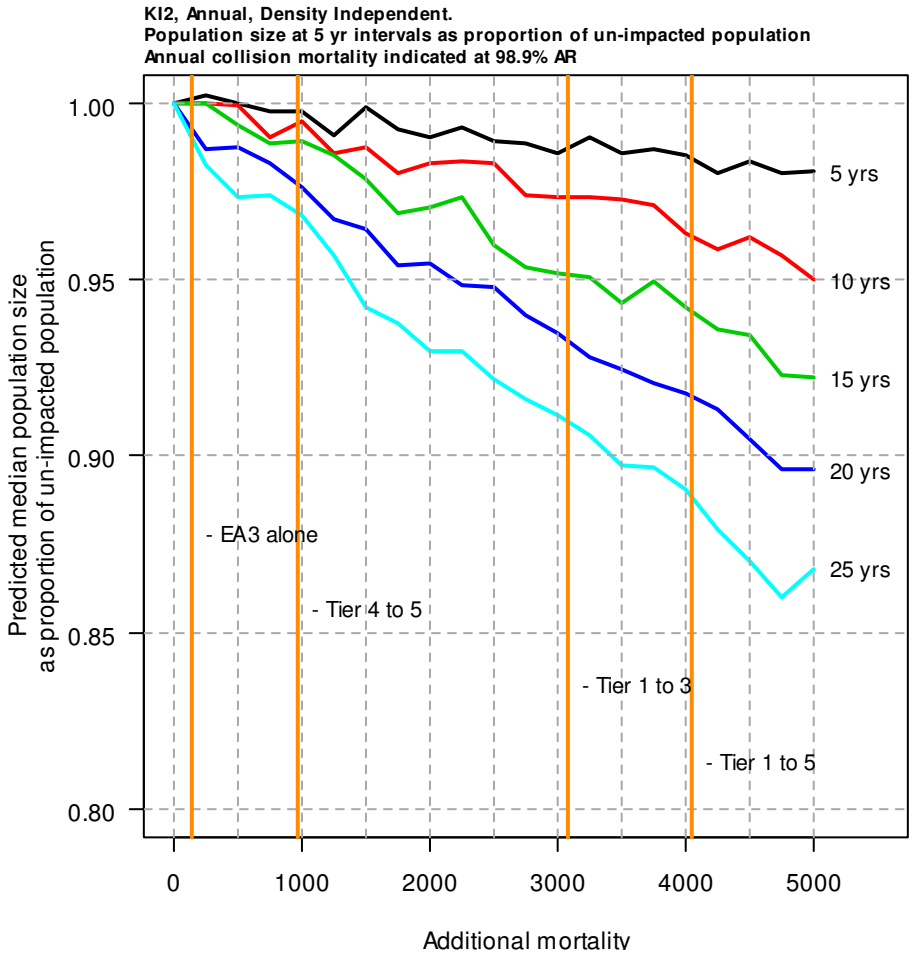

Figure 67 Kittiwake - Annual: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

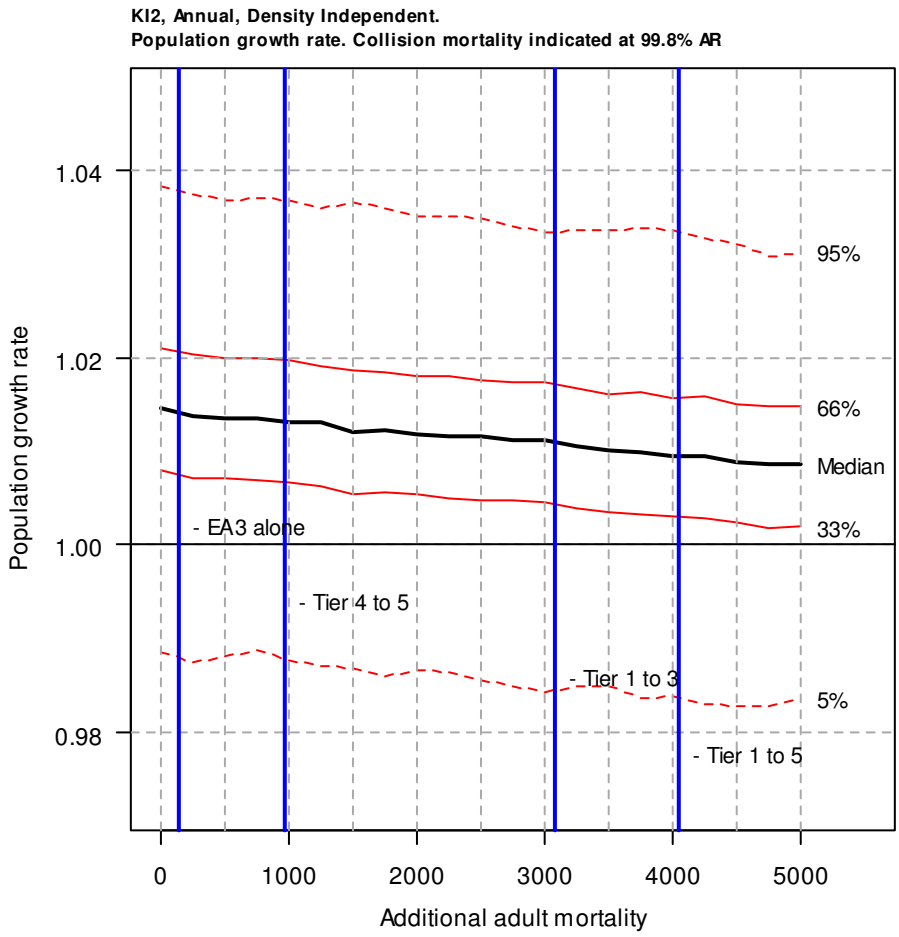

Figure 68 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

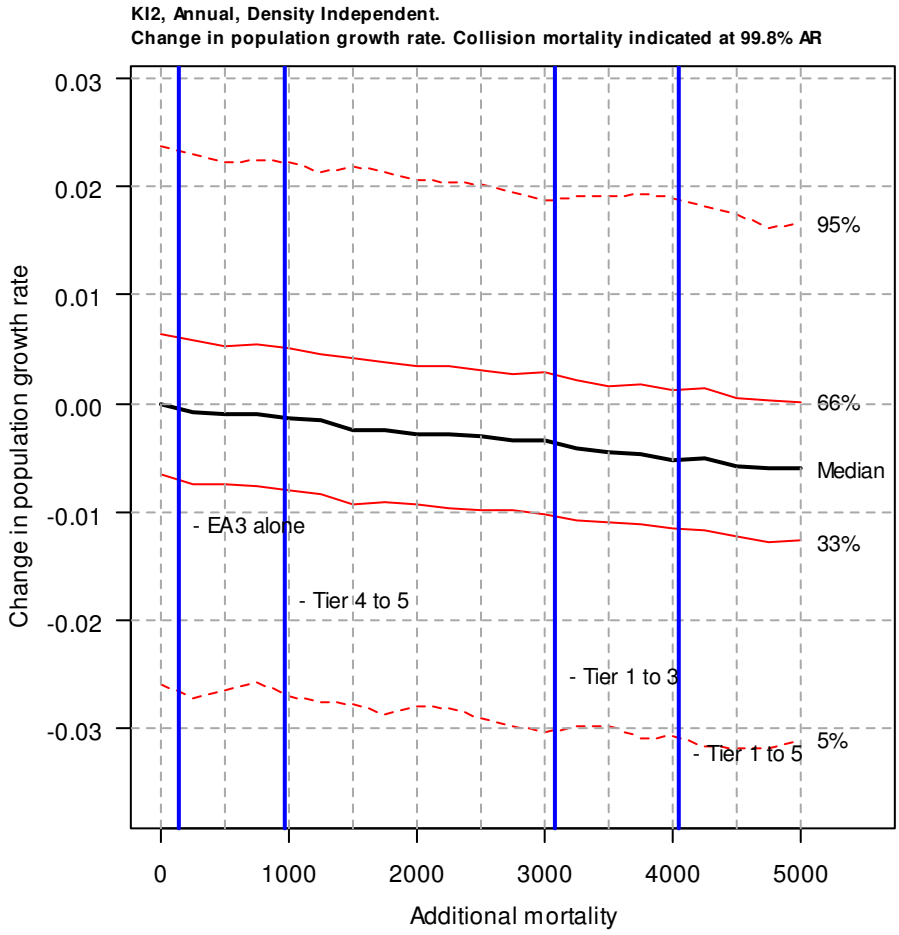

Figure 69 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

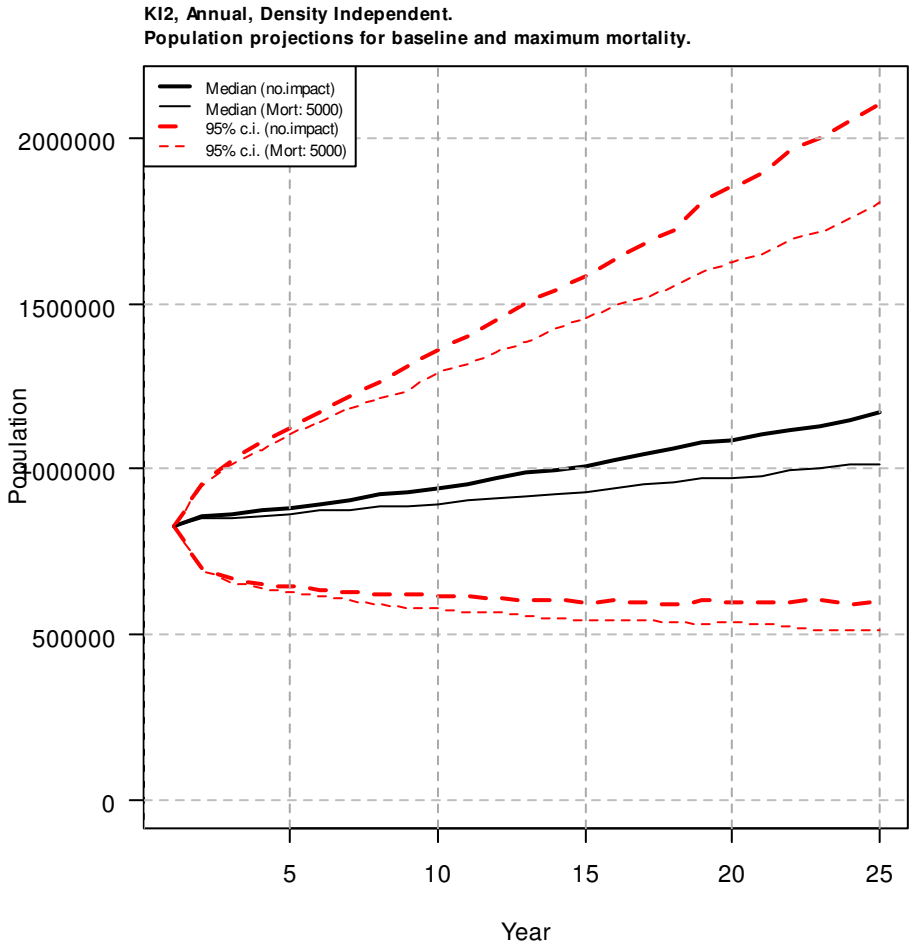

Figure 70 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

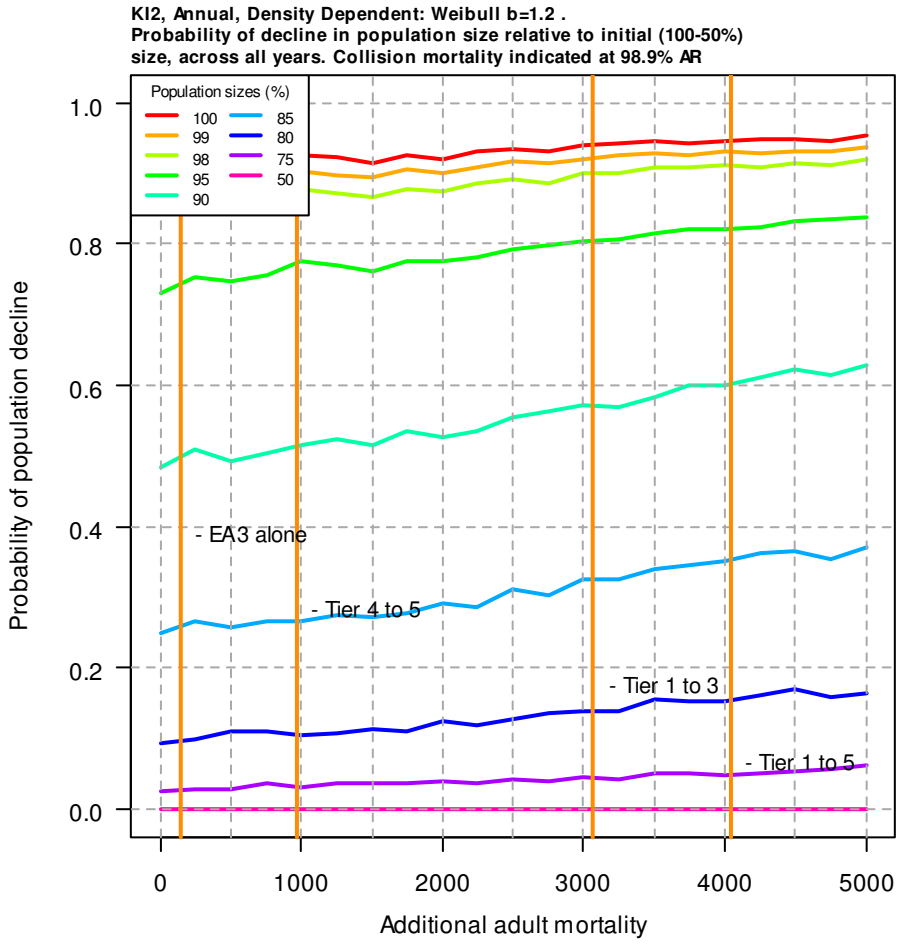

Figure 71 Kittiwake - Annual: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

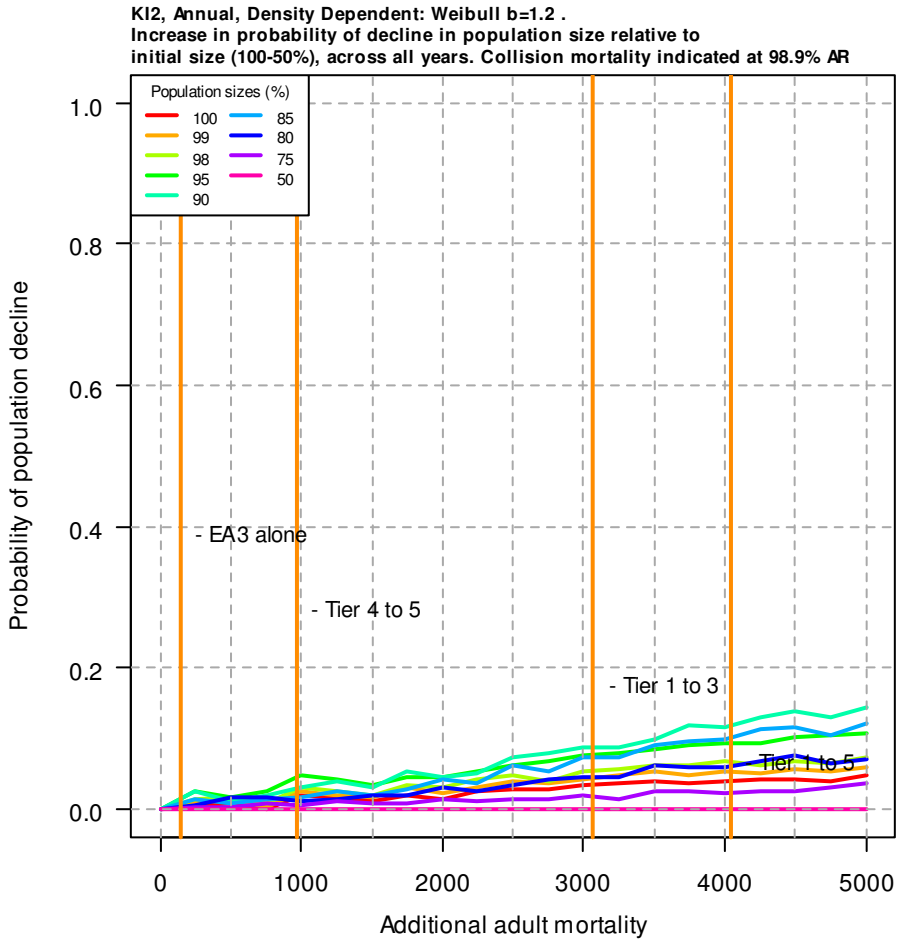

Figure 72 Kittiwake - Annual: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

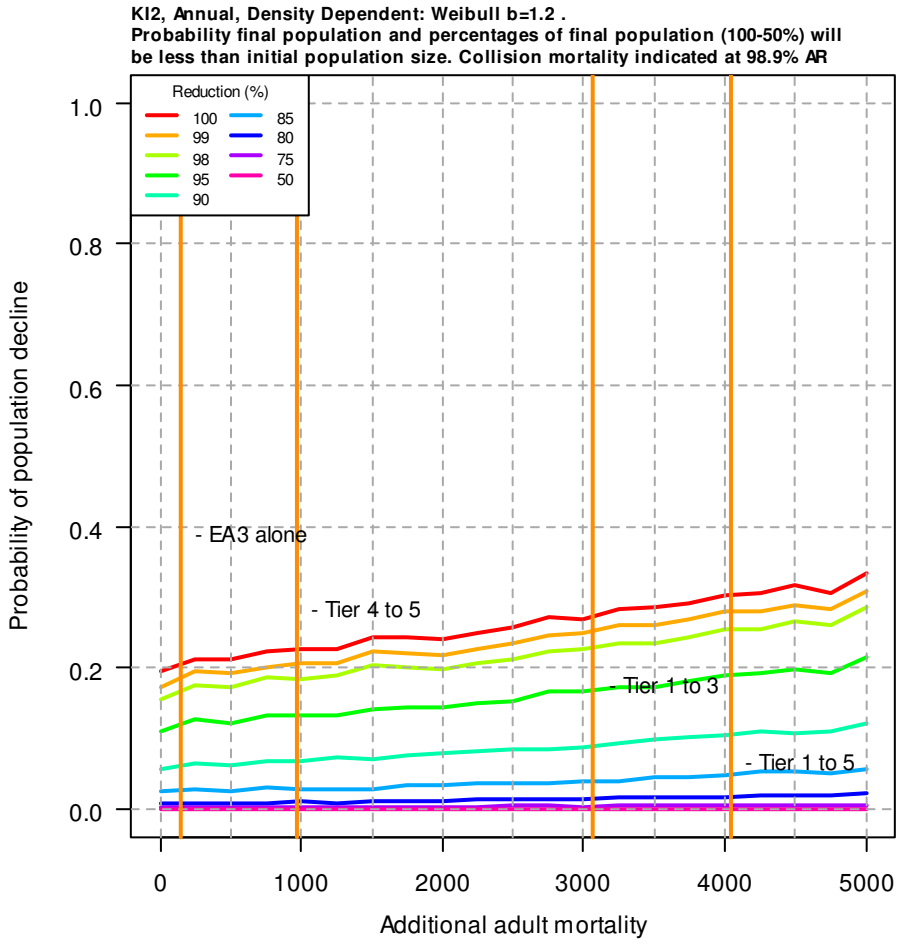

Figure 73 Kittiwake - Annual: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

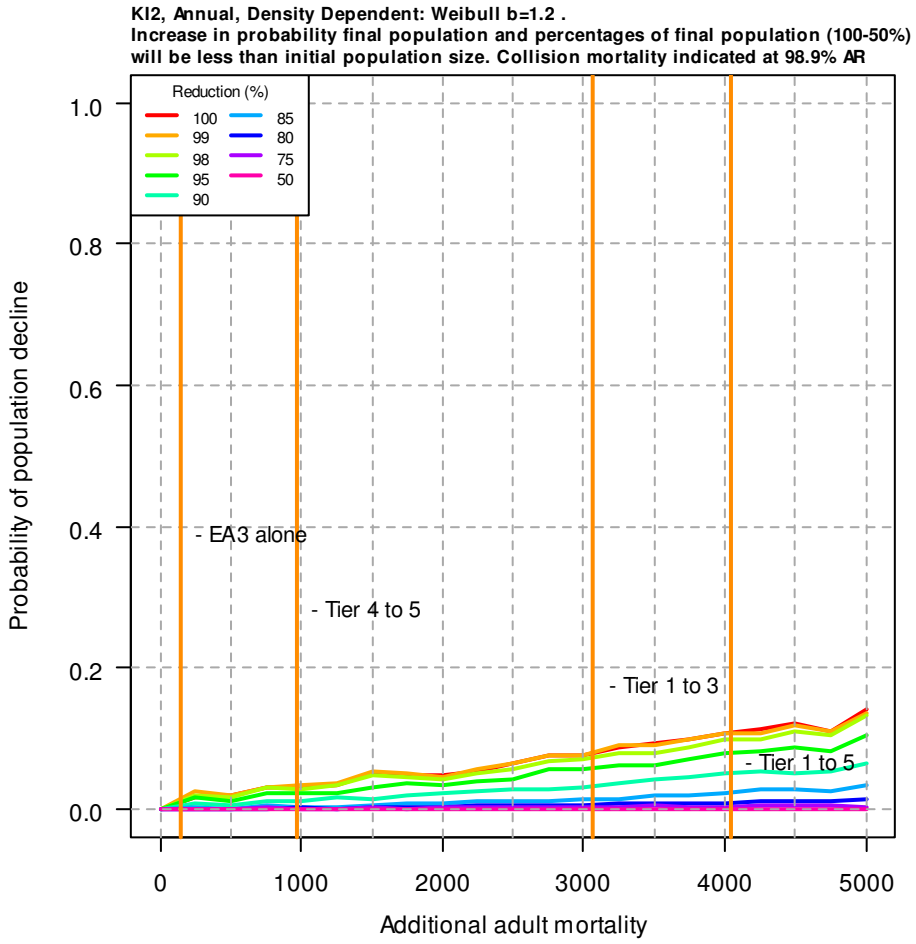

Figure 74 Kittiwake - Annual: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

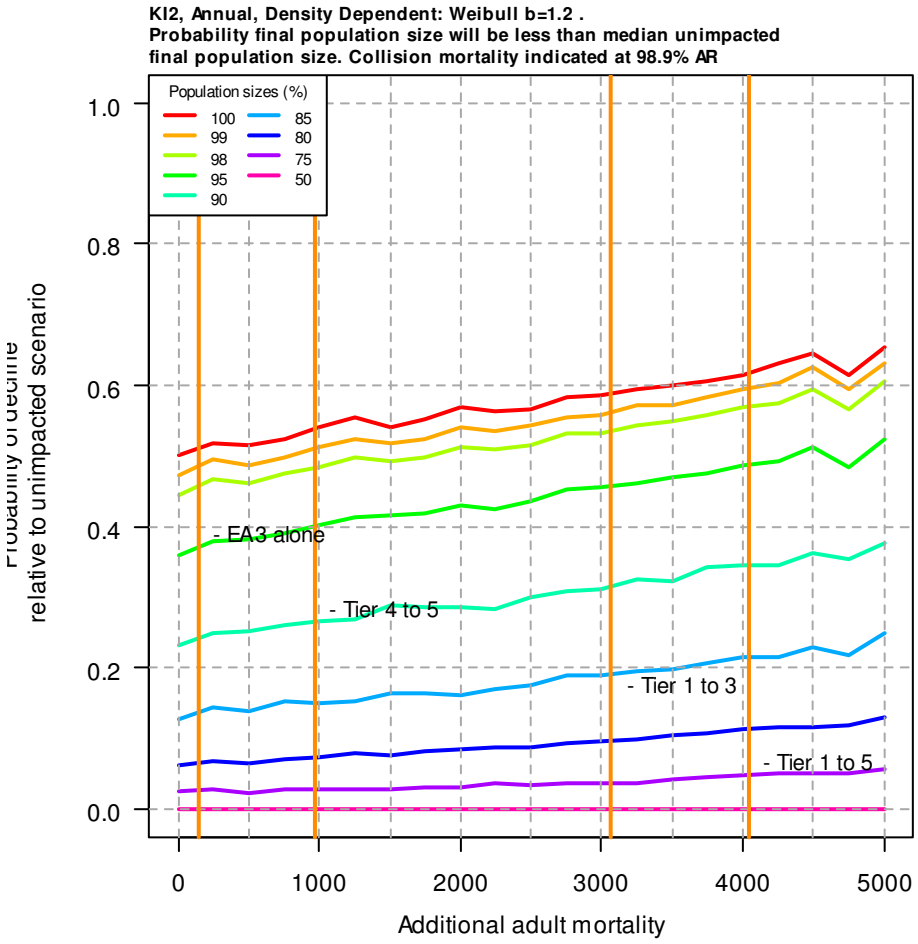

Figure 75 Kittiwake - Annual: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

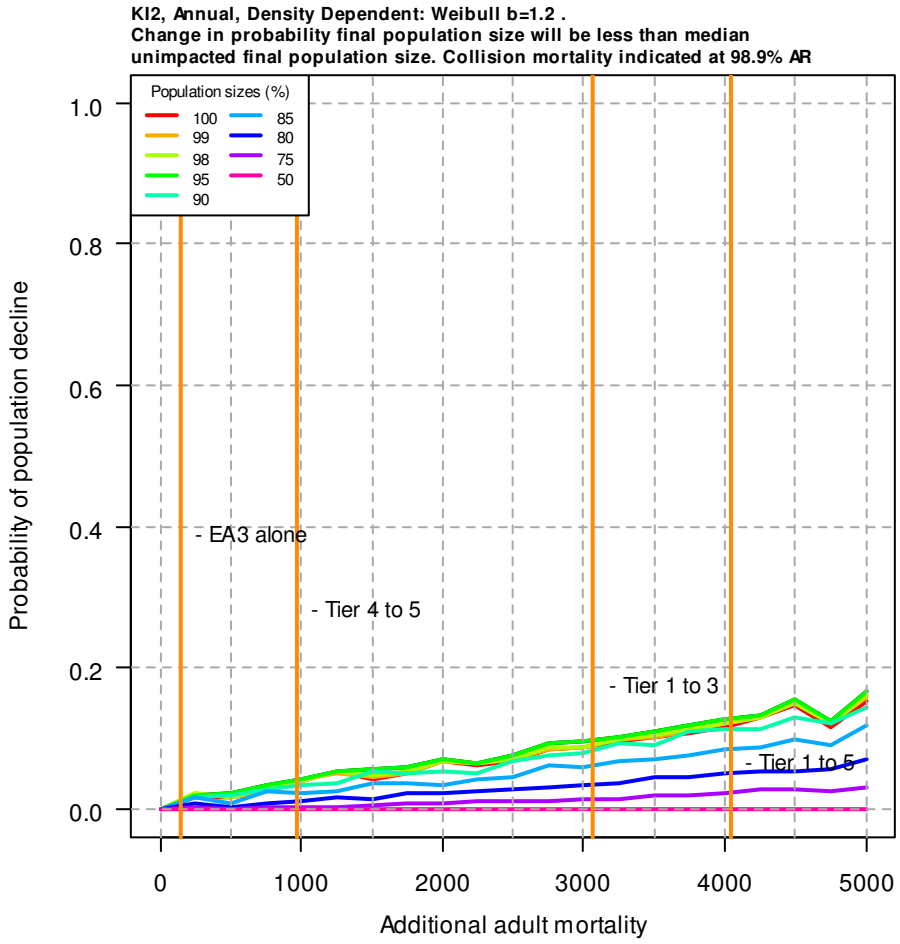

Figure 76 Kittiwake - Annual: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

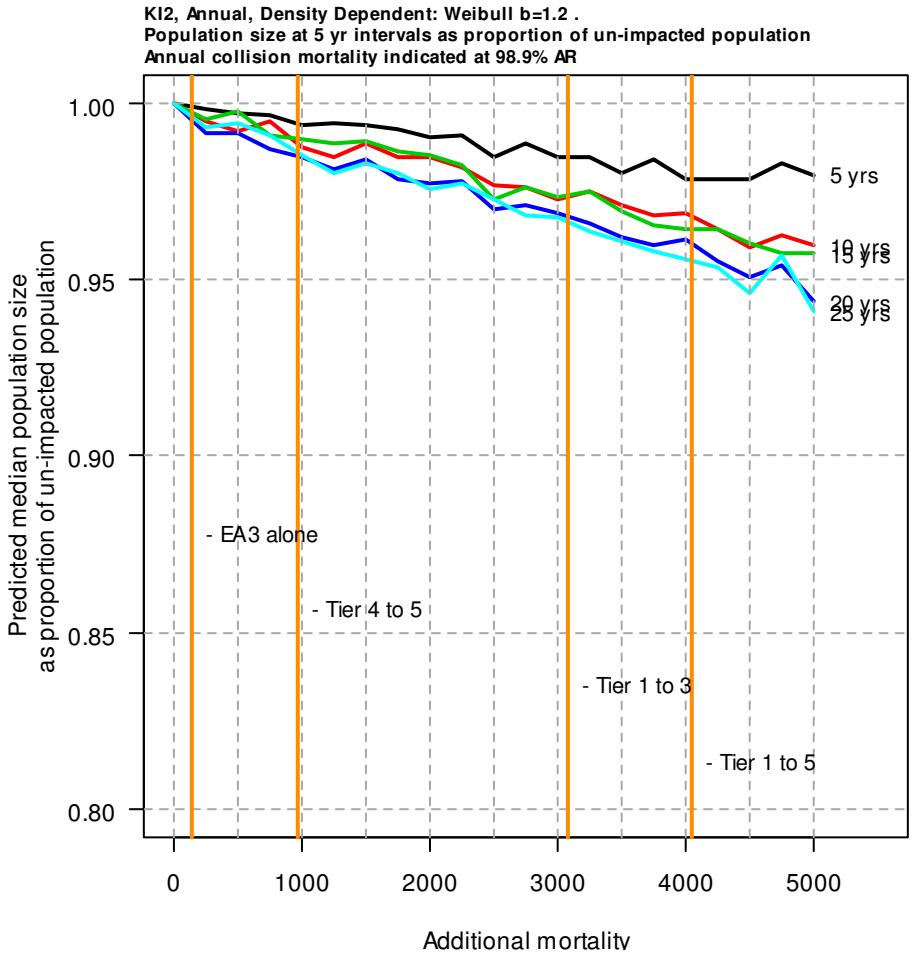

Figure 77 Kittiwake - Annual: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

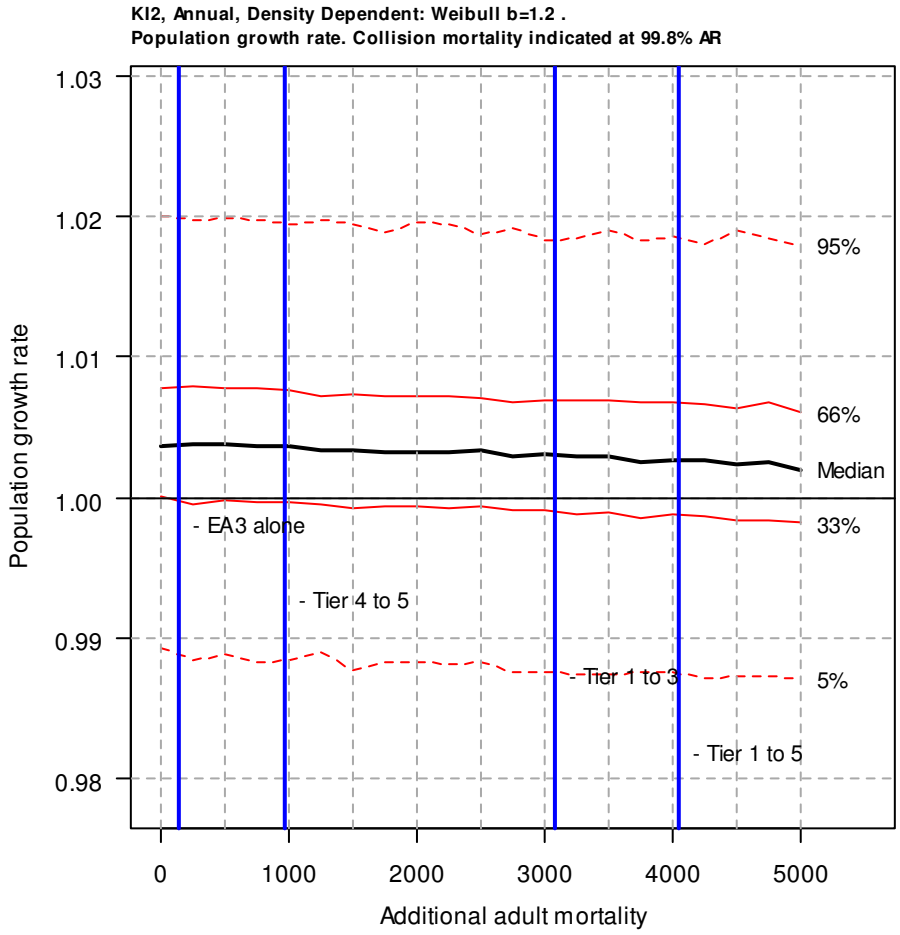

Figure 78 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

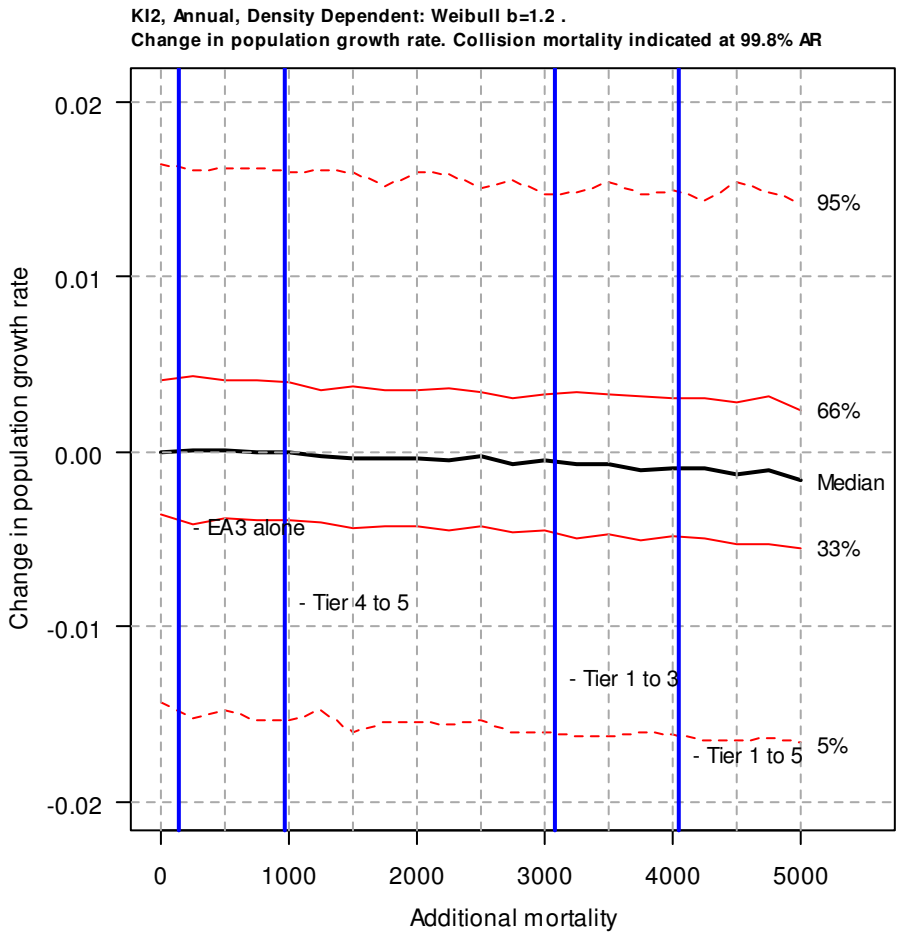

Figure 79 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

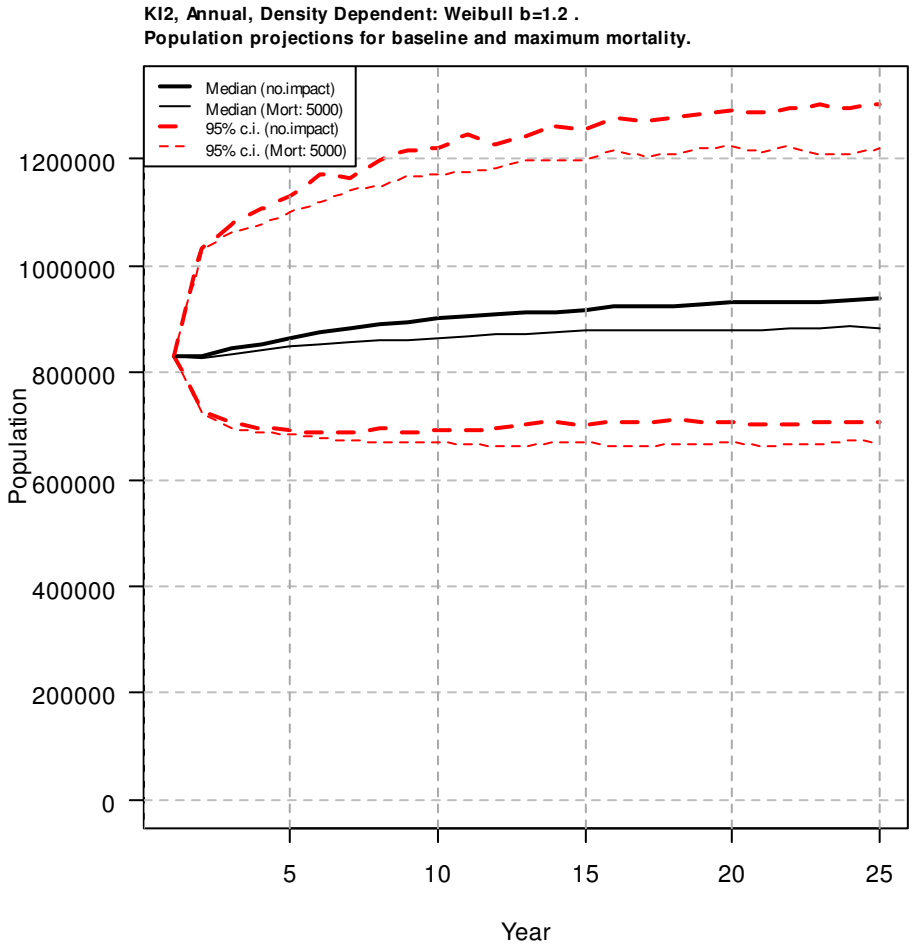

Figure 80 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

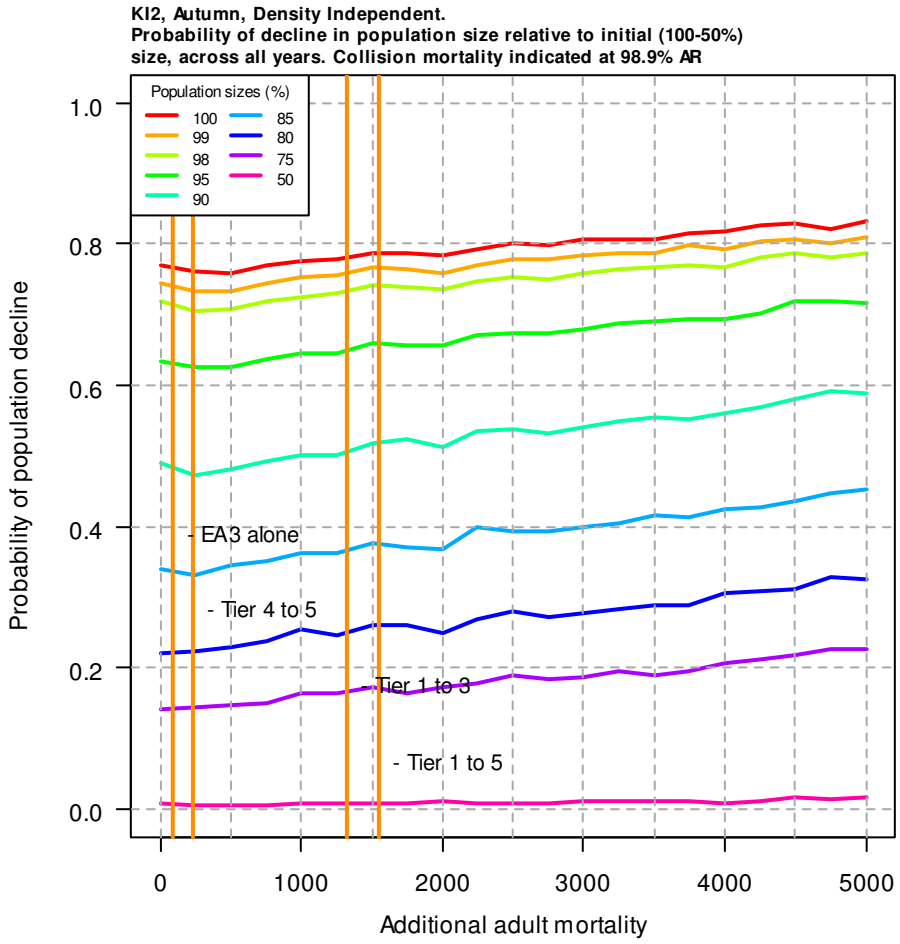

Figure 81 Kittiwake - Autumn: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

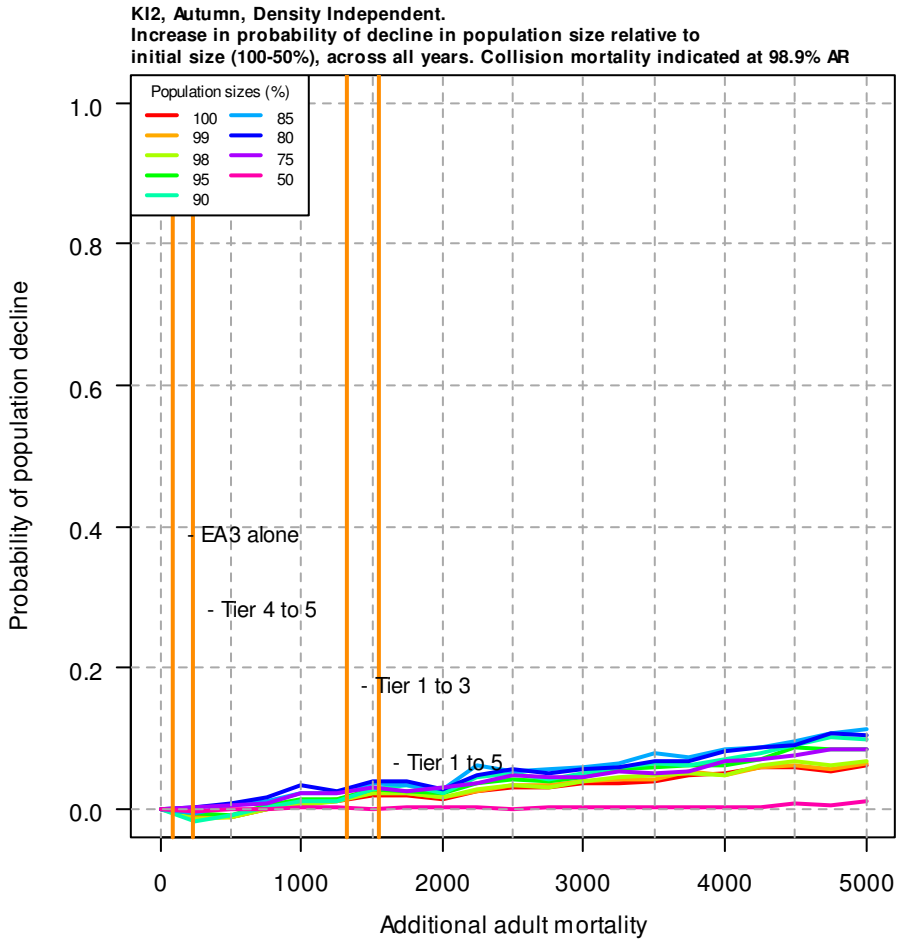

Figure 82 Kittiwake - Autumn: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

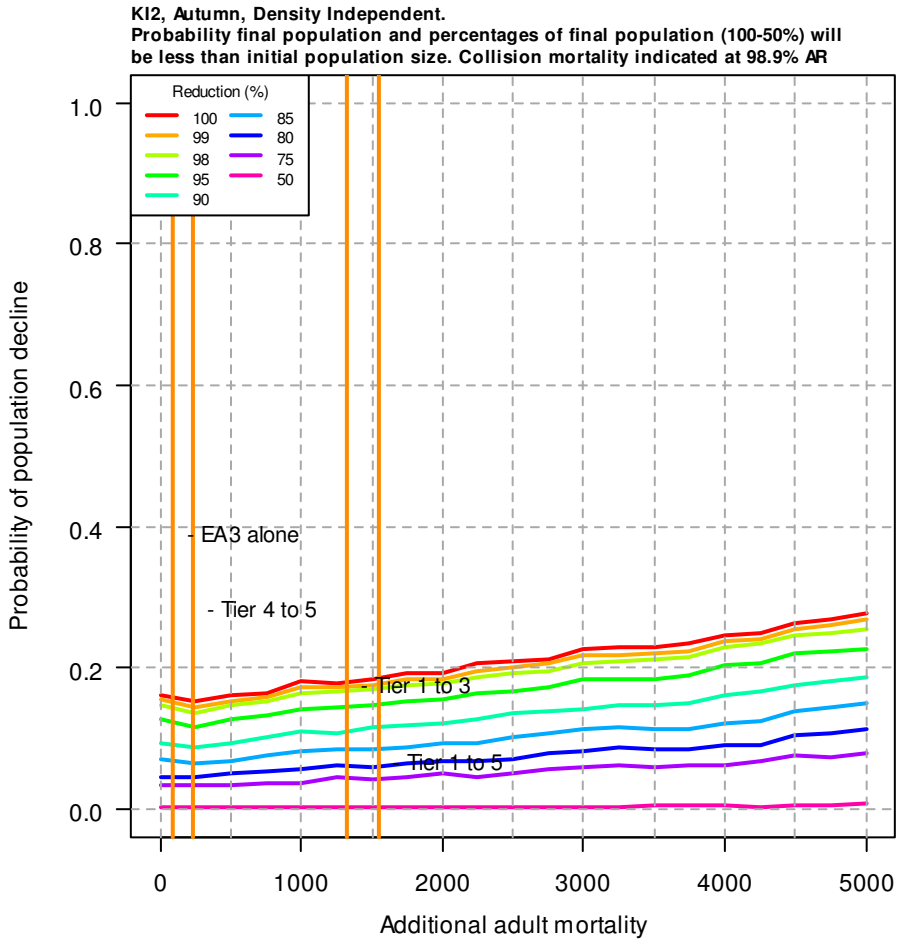

Figure 83 Kittiwake - Autumn: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

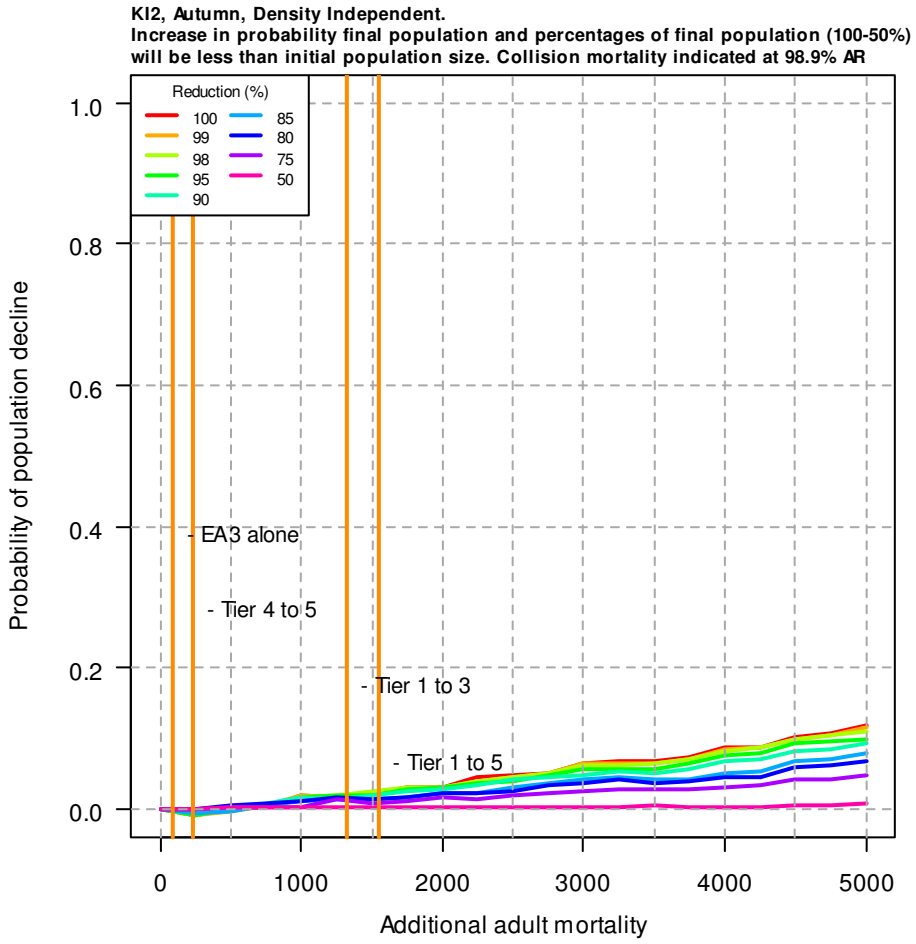

Figure 84 Kittiwake - Autumn: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

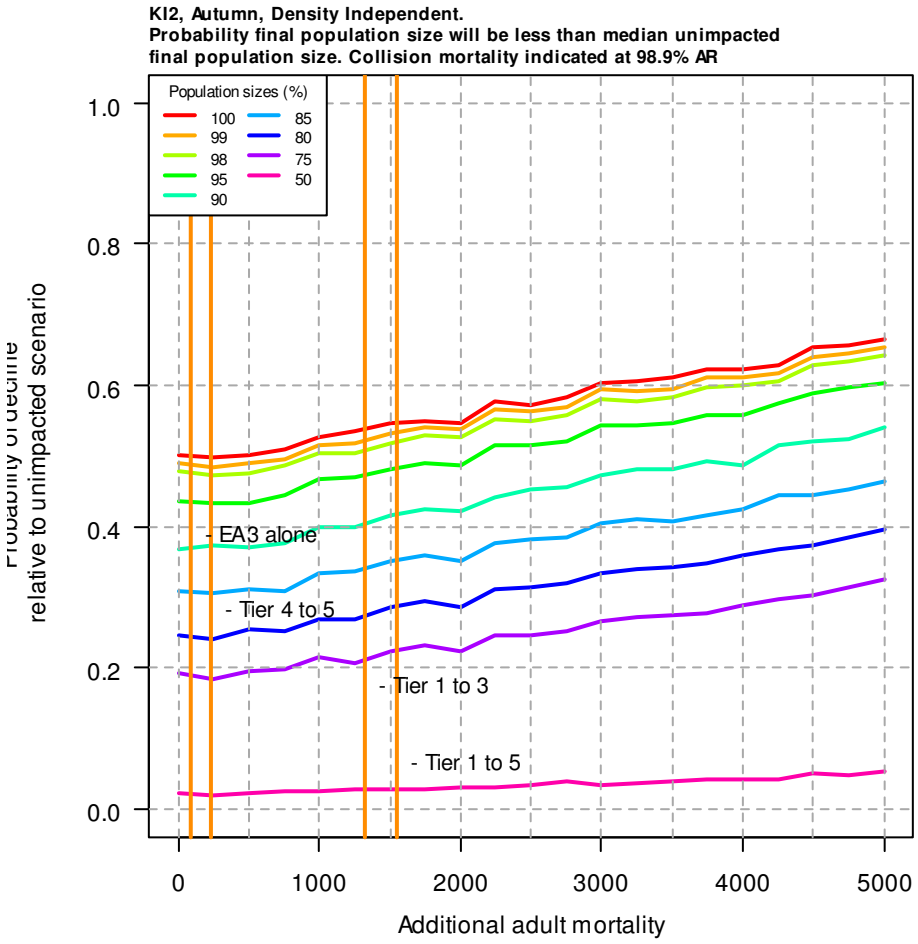

Figure 85 Kittiwake - Autumn: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

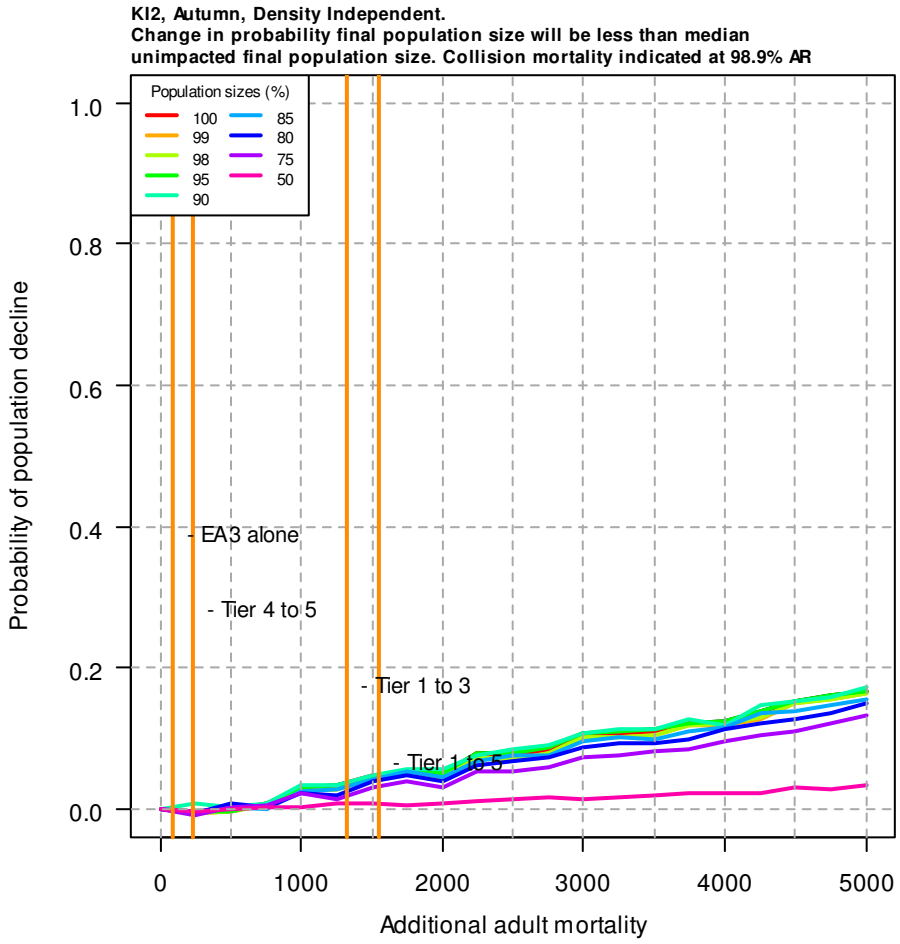

Figure 86 Kittiwake - Autumn: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

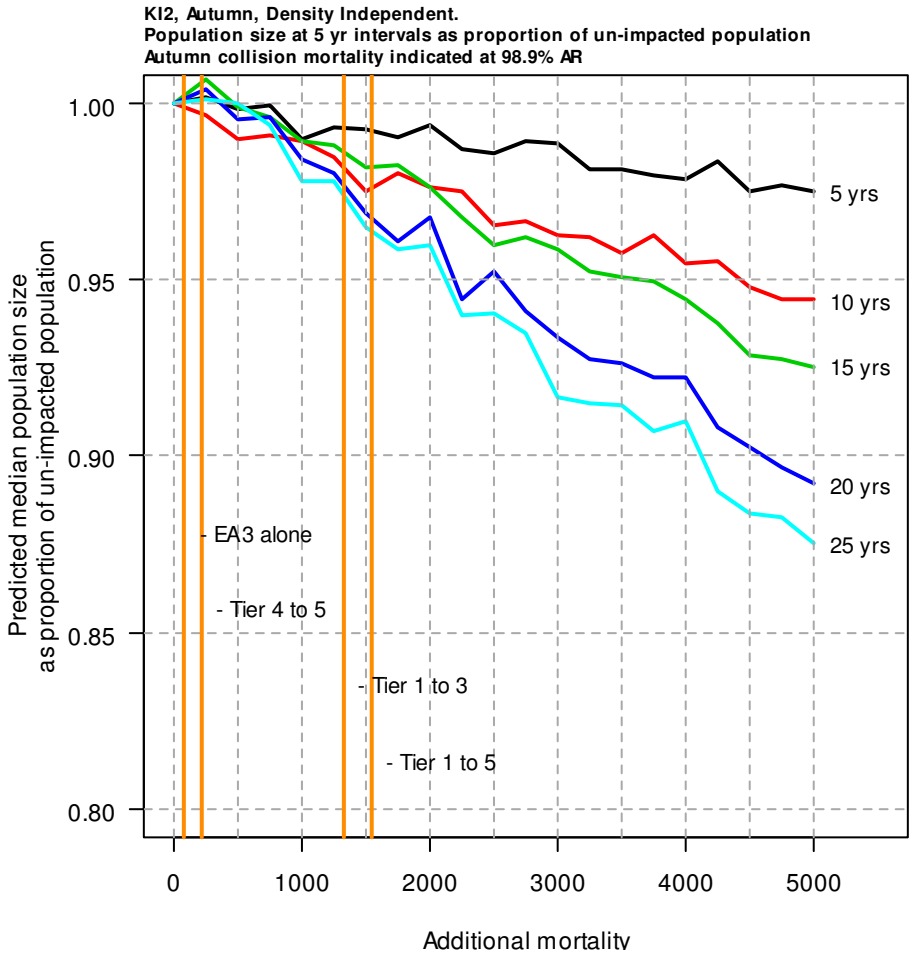

Figure 87 Kittiwake - Autumn: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

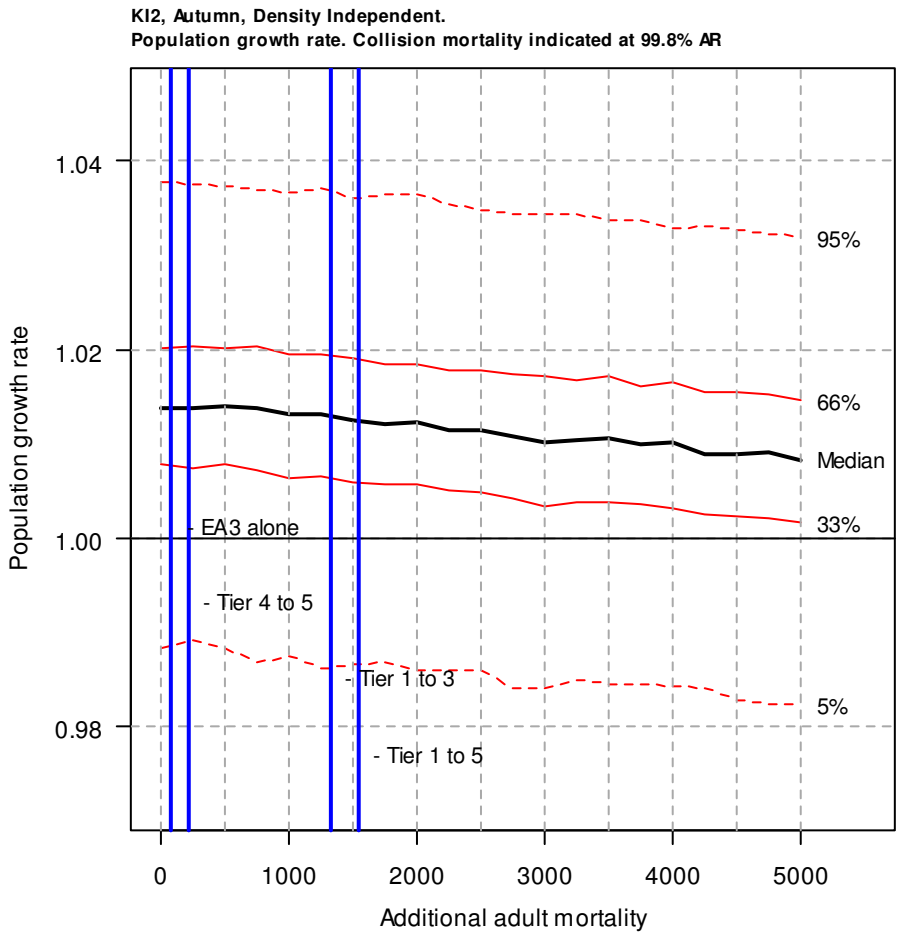

Figure 88 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

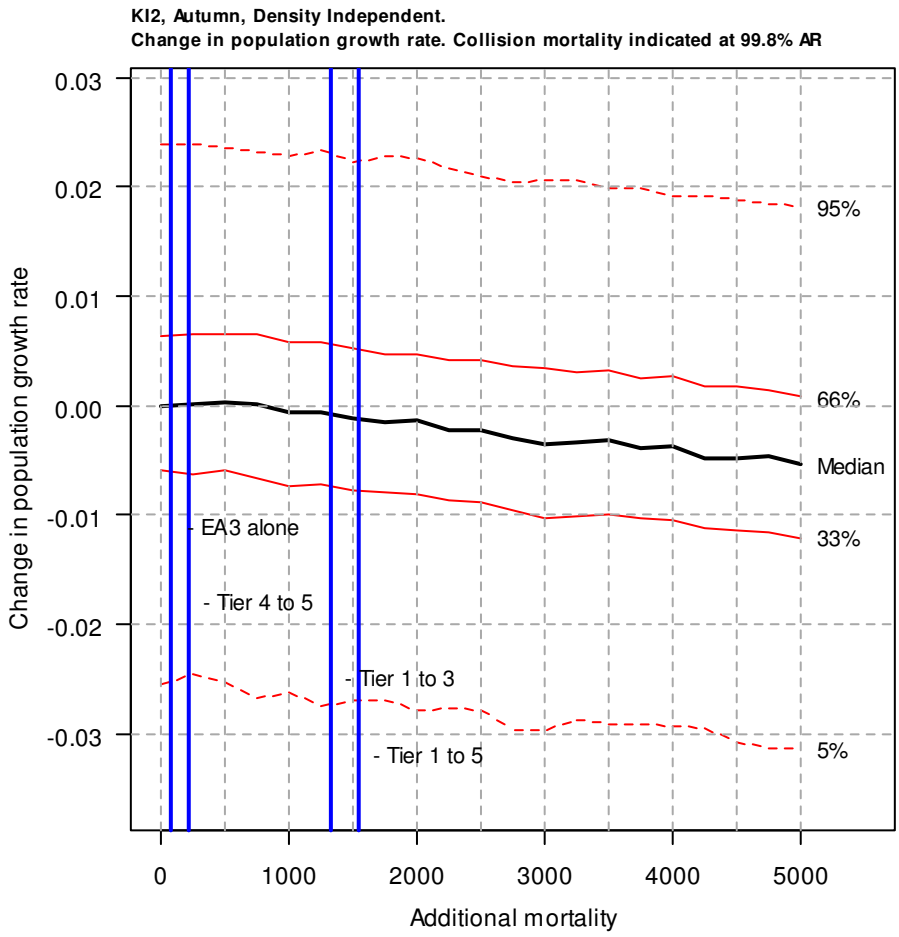

Figure 89 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

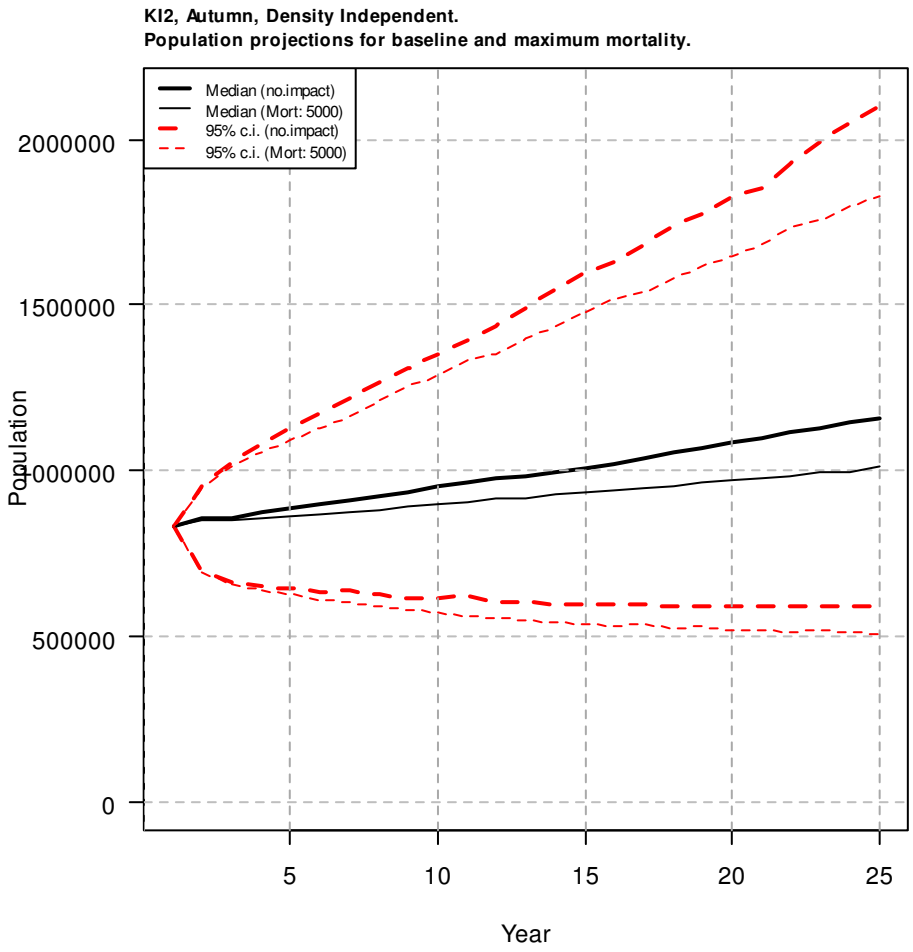

Figure 90 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

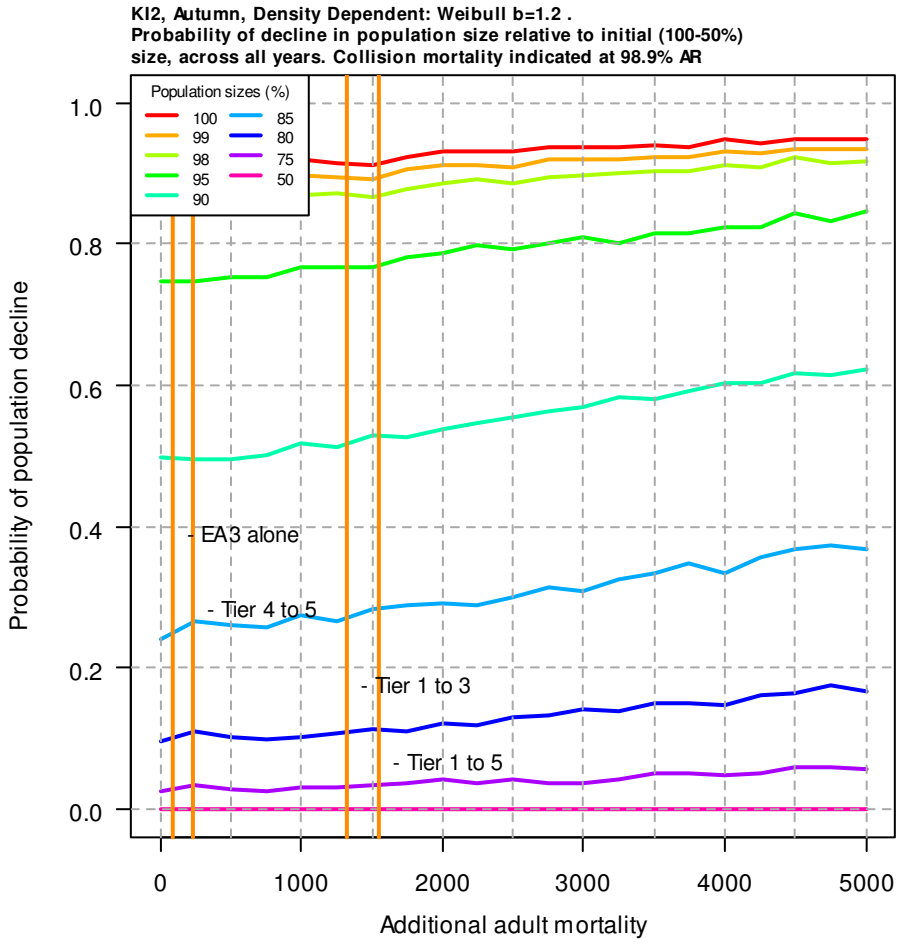

Figure 91 Kittiwake - Autumn: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

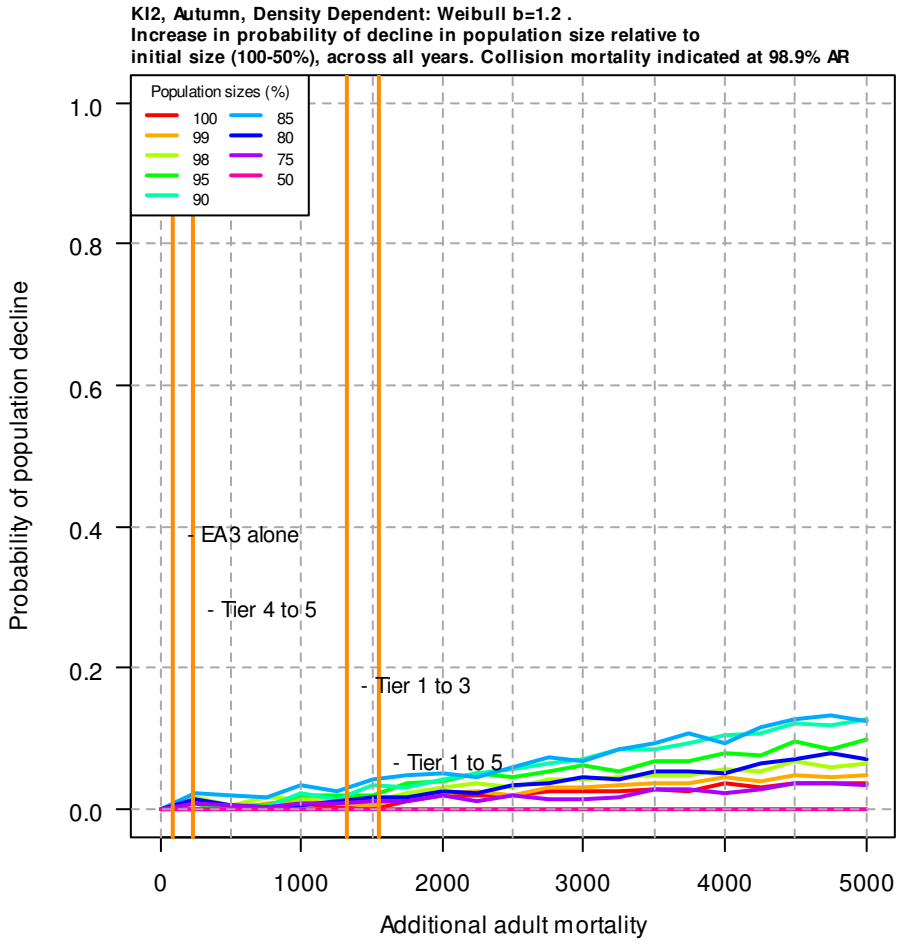

Figure 92 Kittiwake - Autumn: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

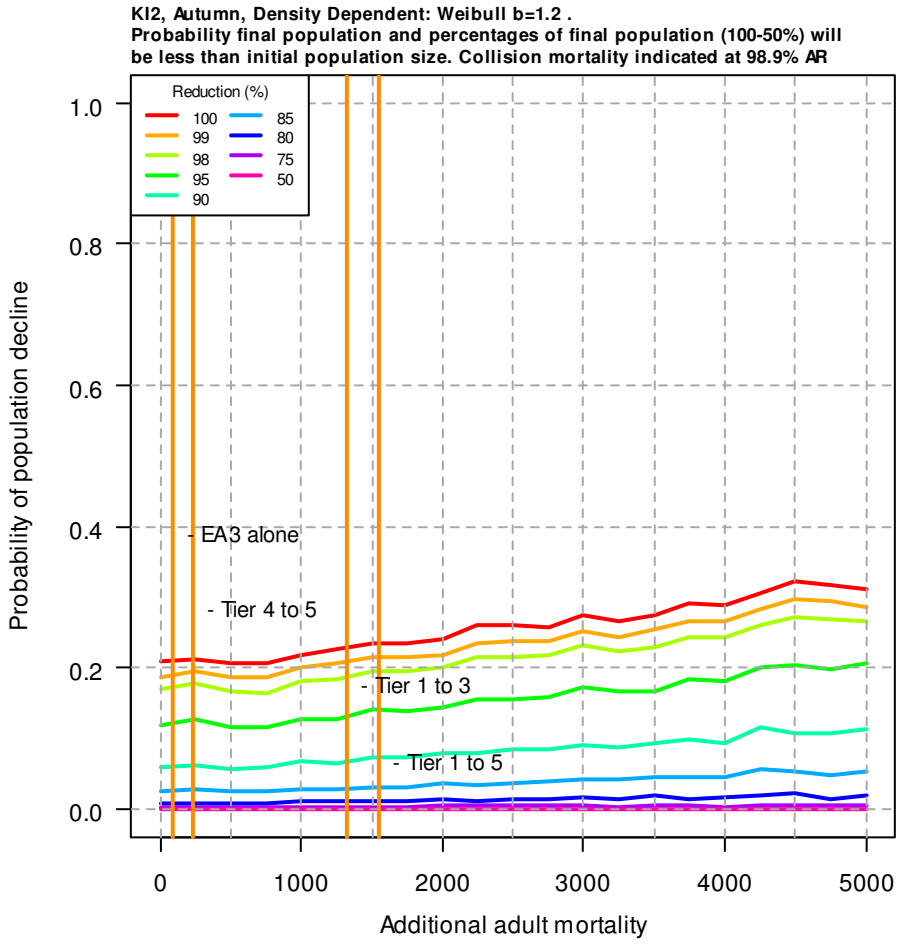

Figure 93 Kittiwake - Autumn: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

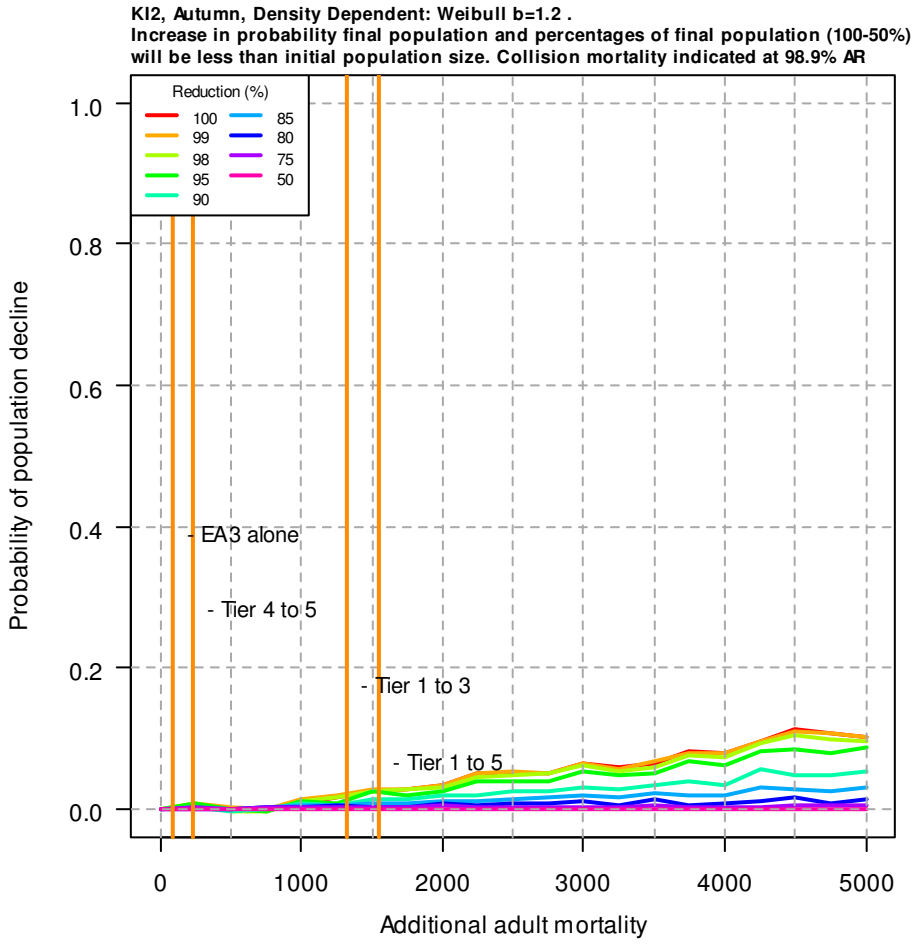

Figure 94 Kittiwake - Autumn: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

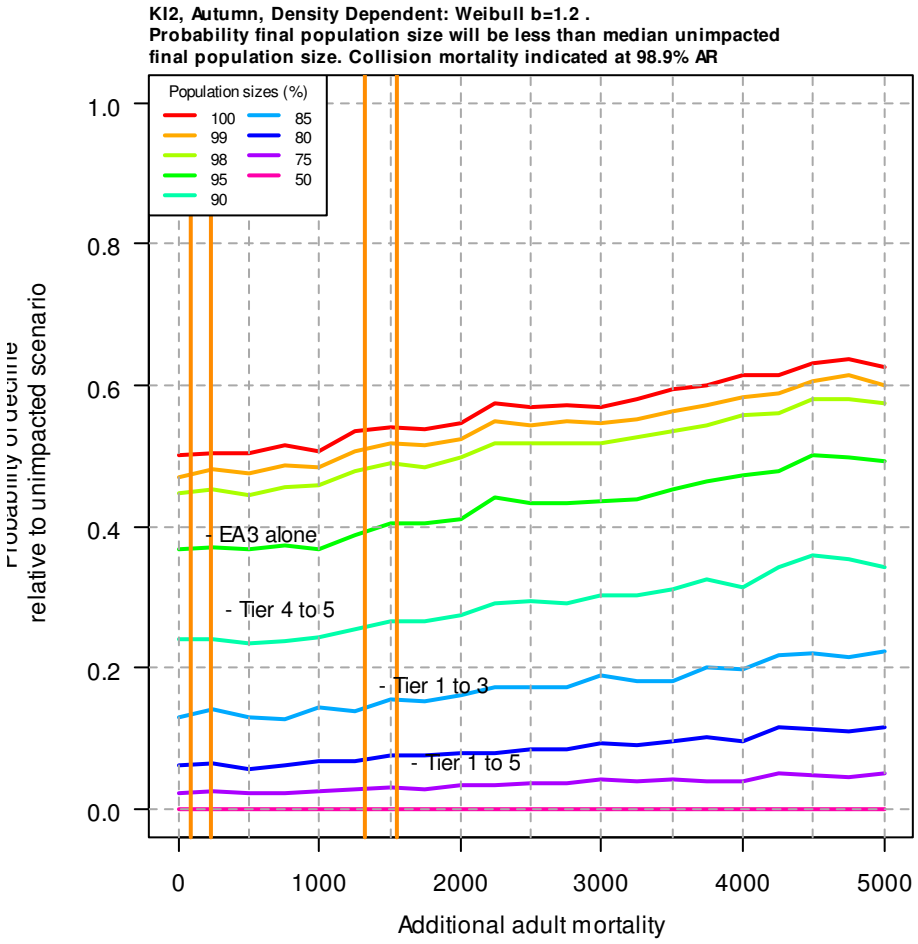

Figure 95 Kittiwake - Autumn: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

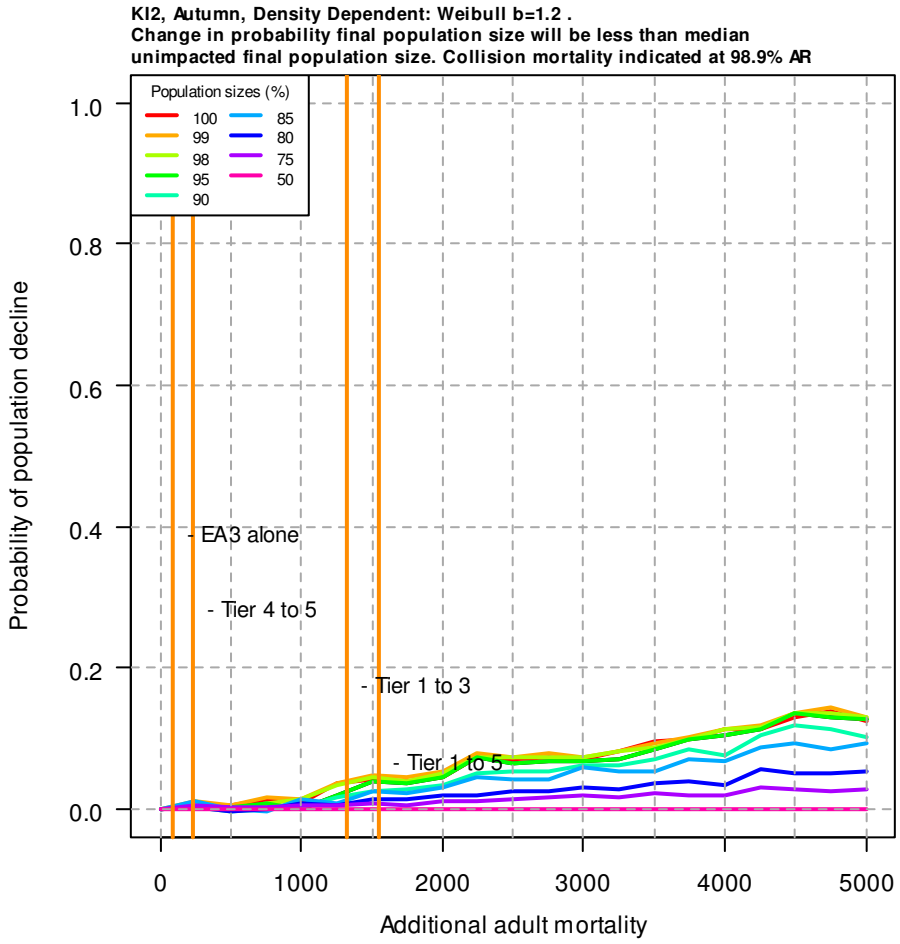

Figure 96 Kittiwake - Autumn: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

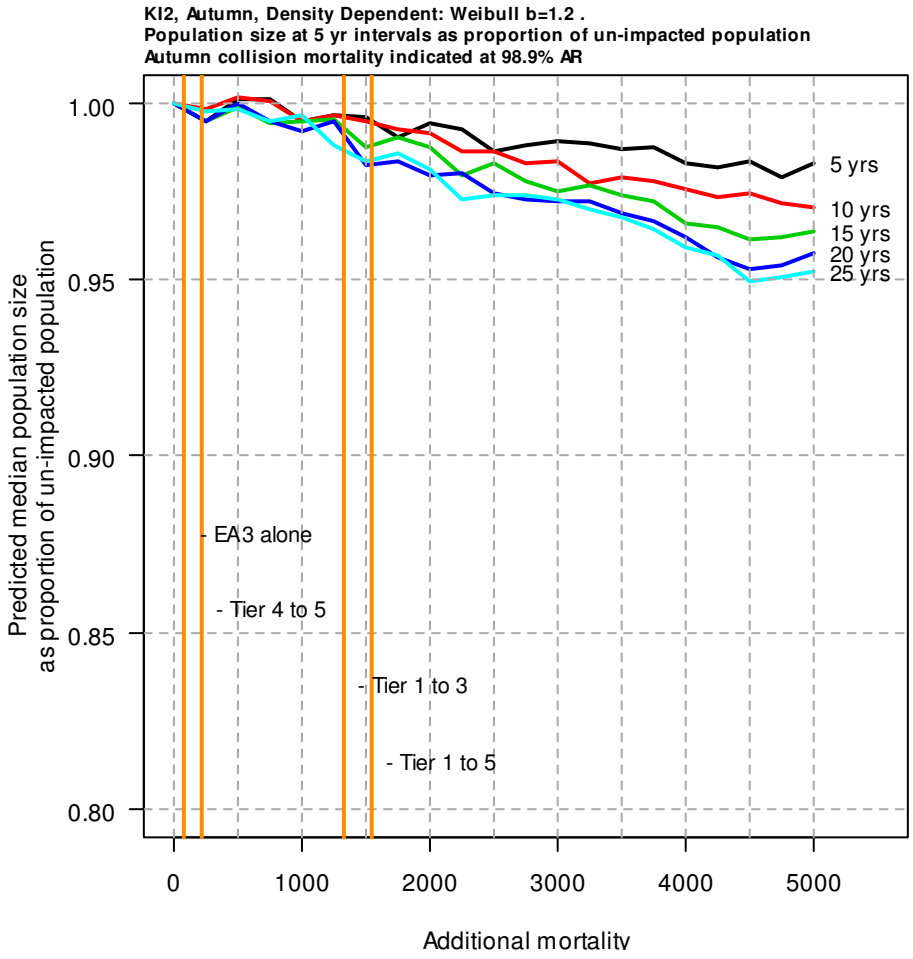

Figure 97 Kittiwake - Autumn: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

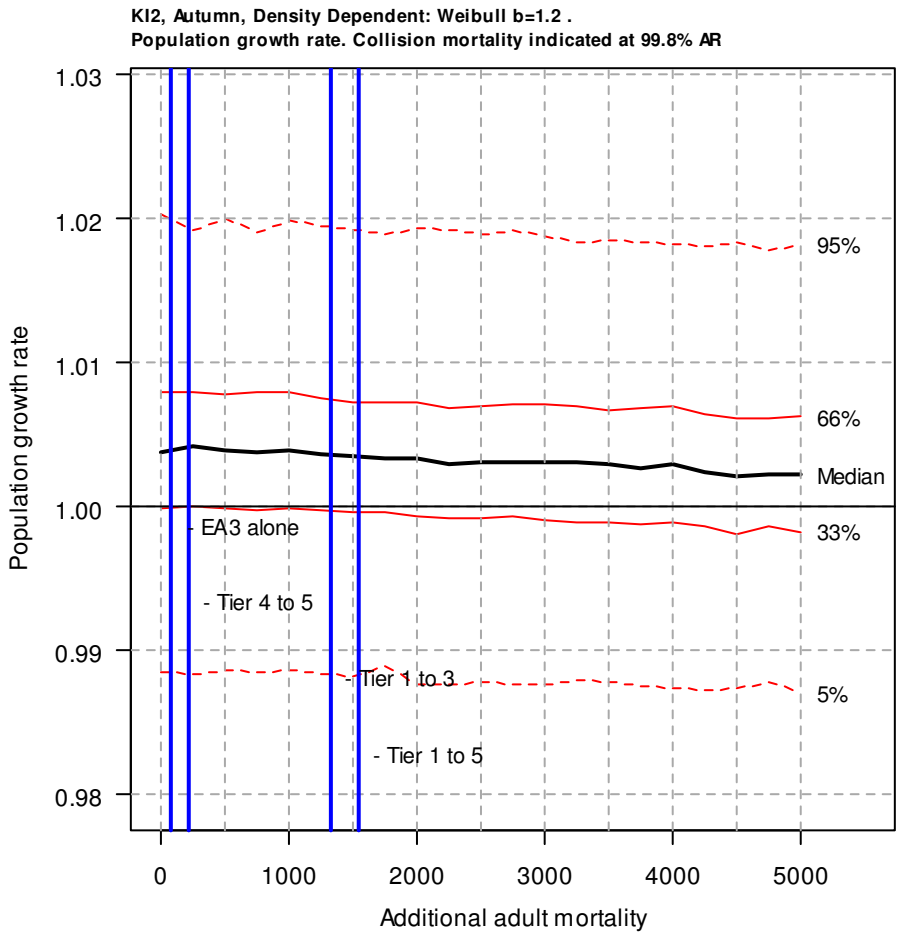

Figure 98 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

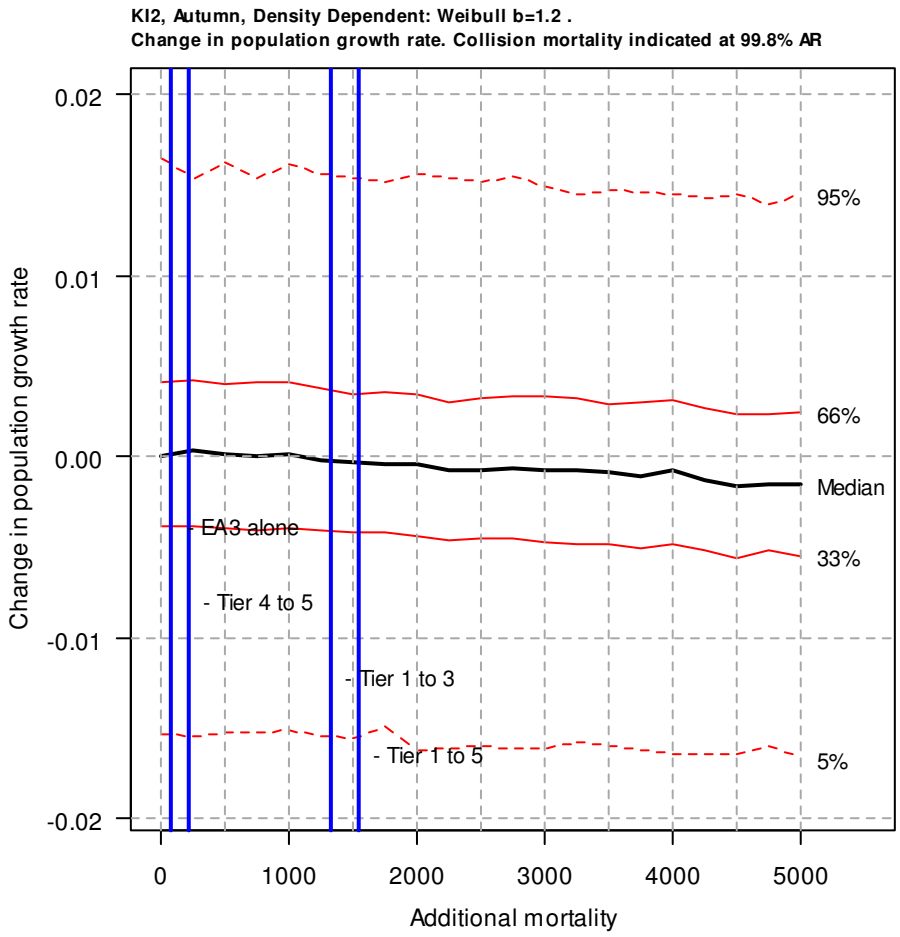

Figure 99 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

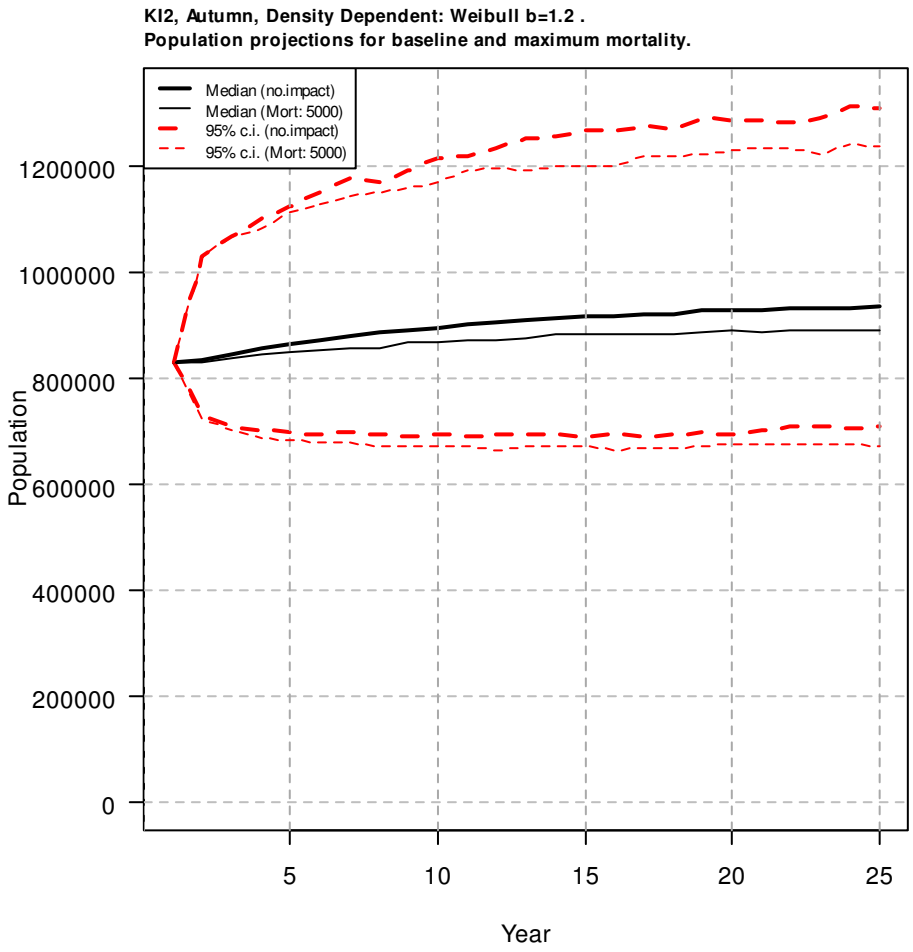

Figure 100 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

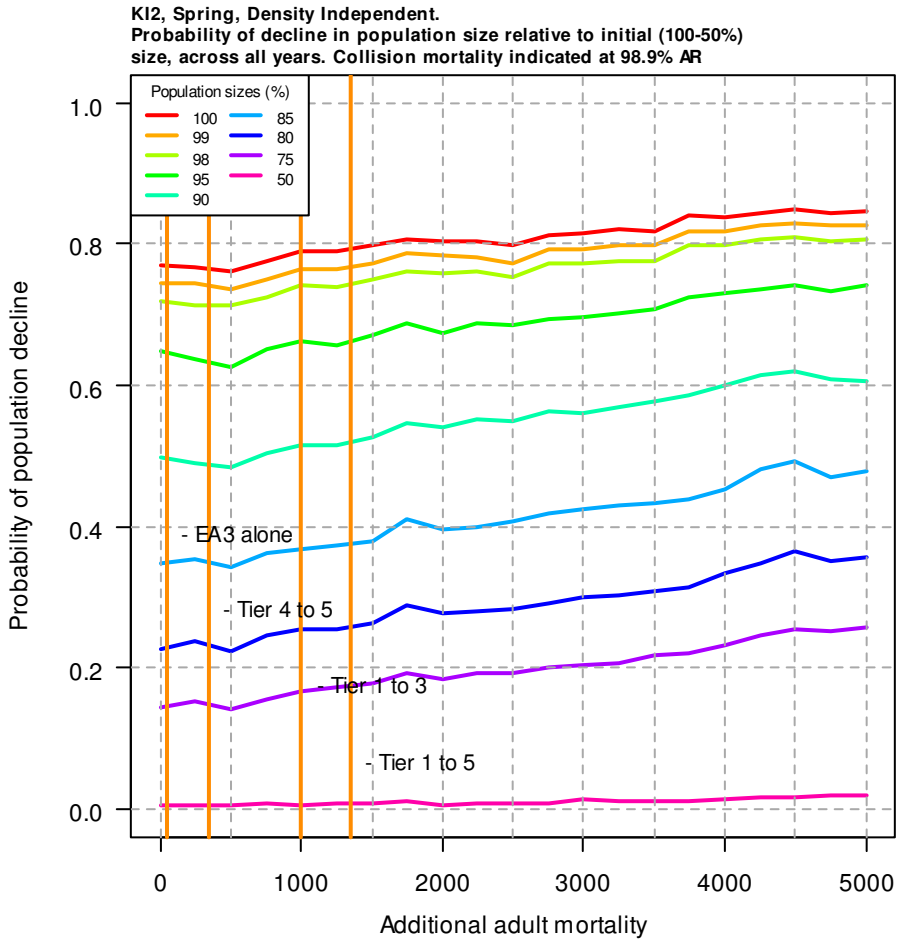

Figure 101 Kittiwake - Spring: Density independent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

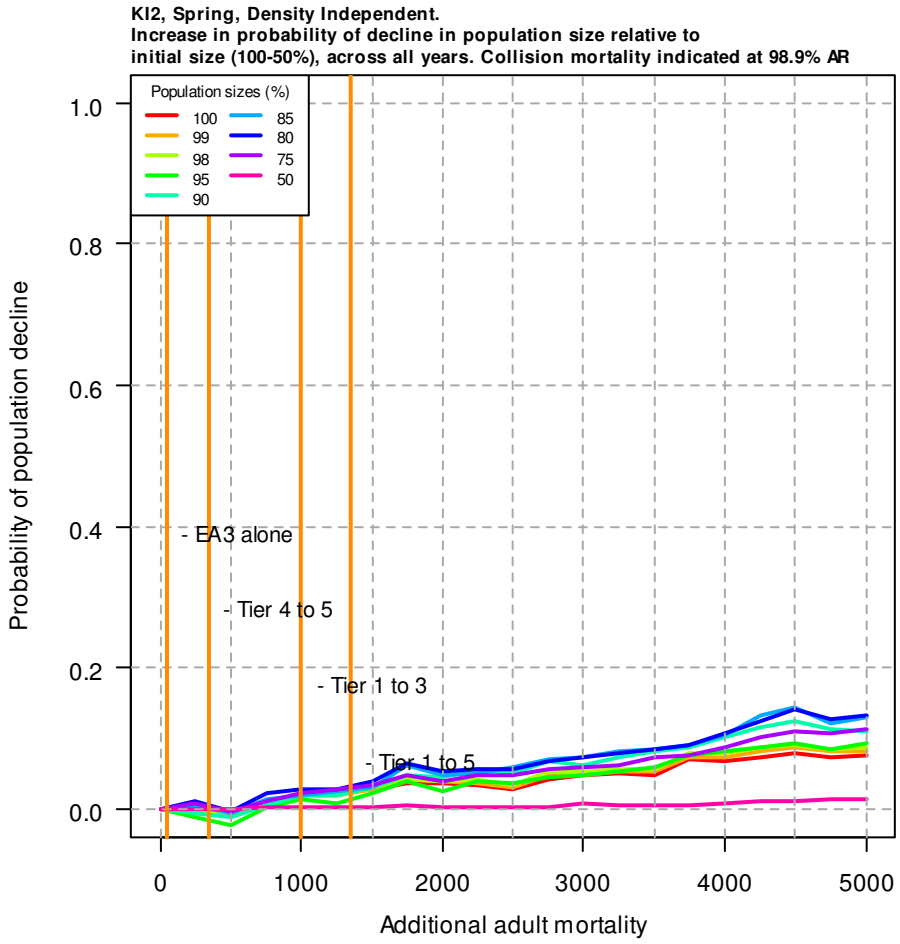

Figure 102 Kittiwake - Spring: Density independent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

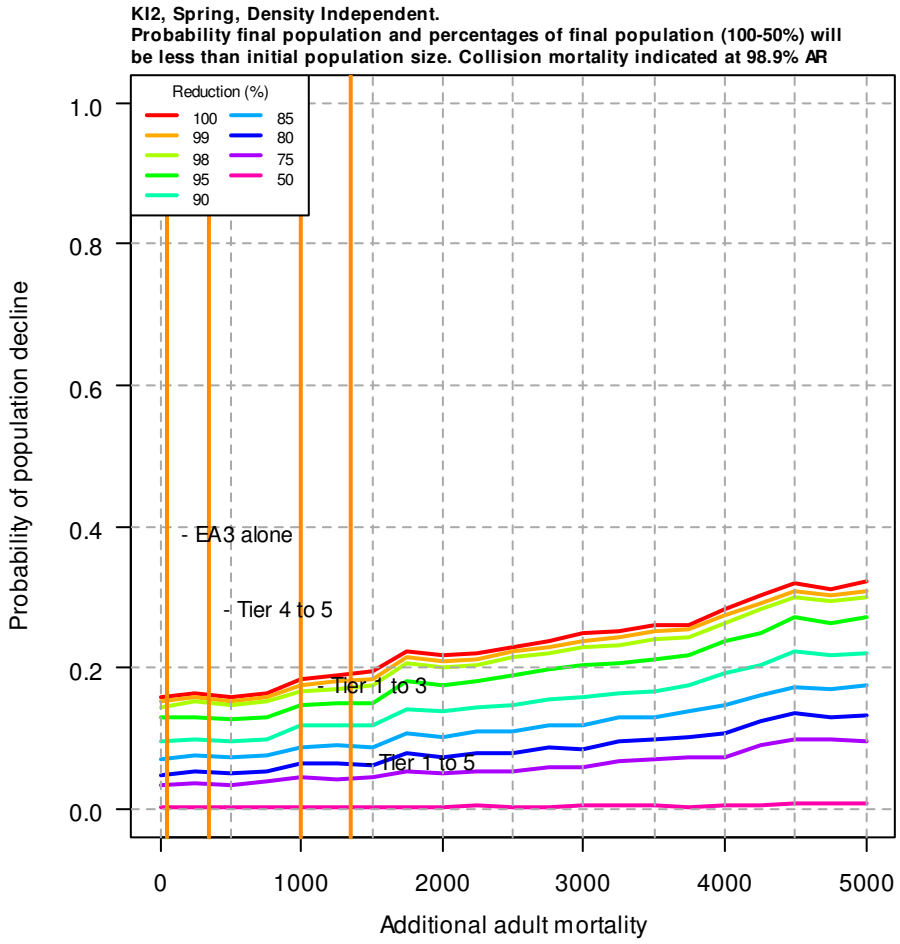

Figure 103 Kittiwake - Spring: Density independent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

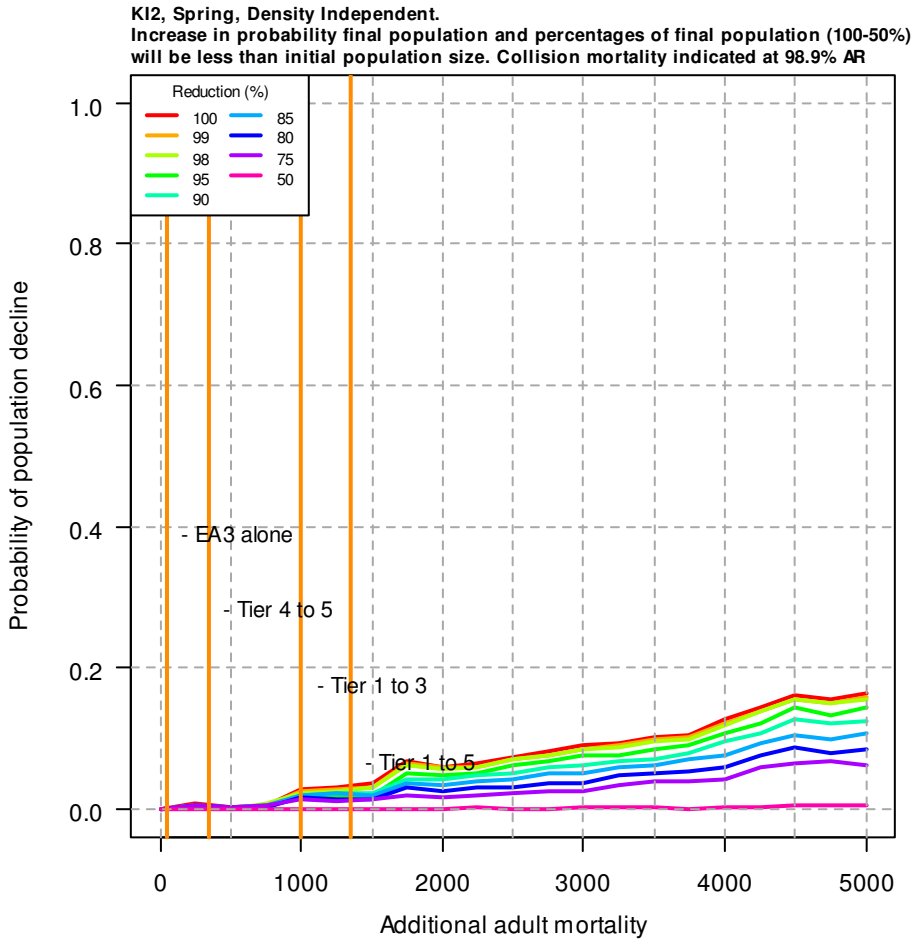

Figure 104 Kittiwake - Spring: Density independent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

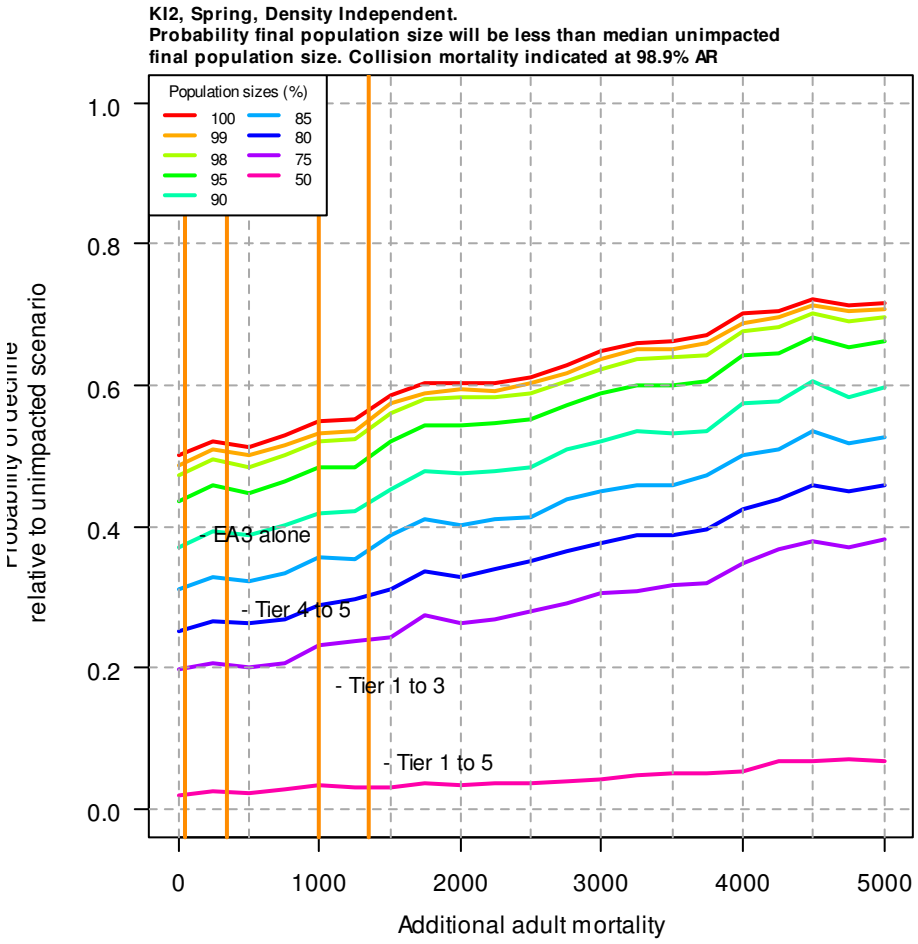

Figure 105 Kittiwake - Spring: Density independent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

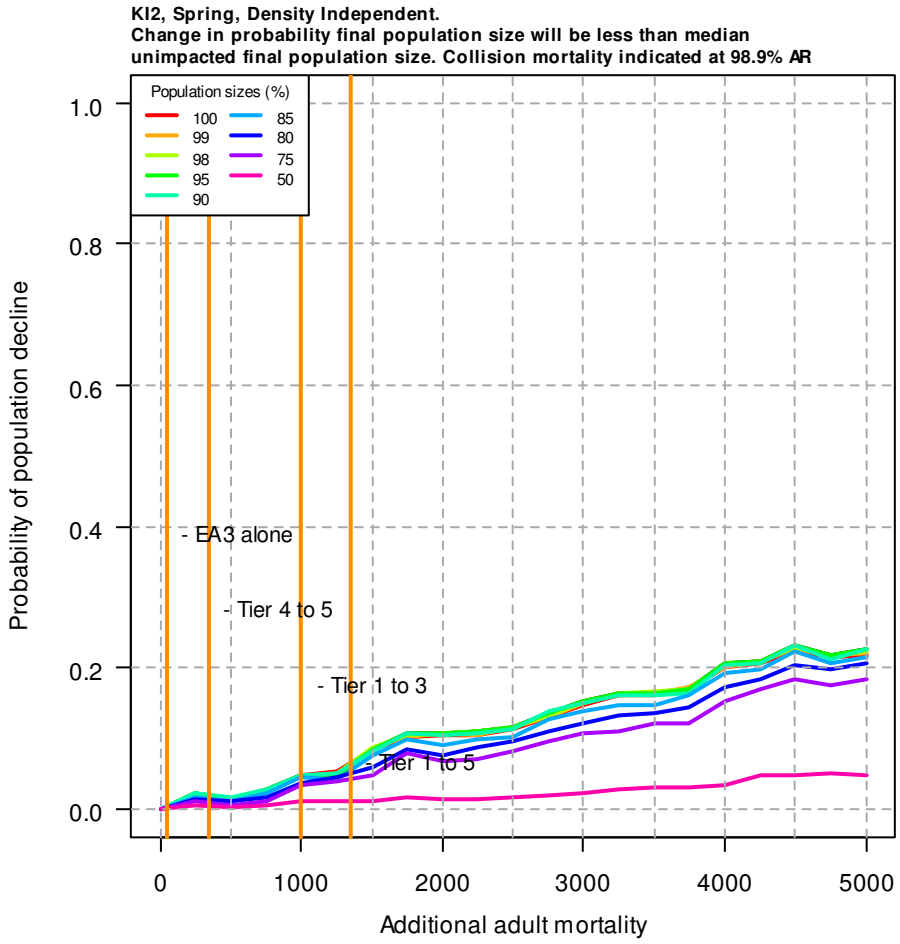

Figure 106 Kittiwake - Spring: Density independent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

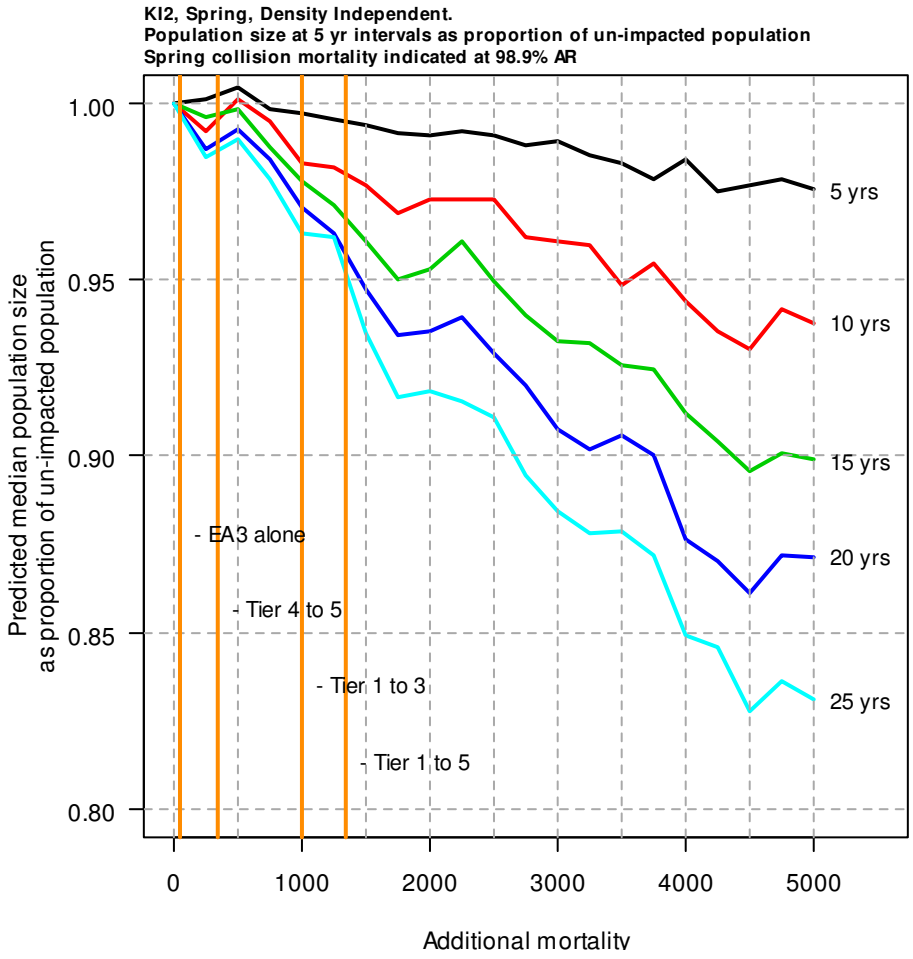

Figure 107 Kittiwake - Spring: Density independent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

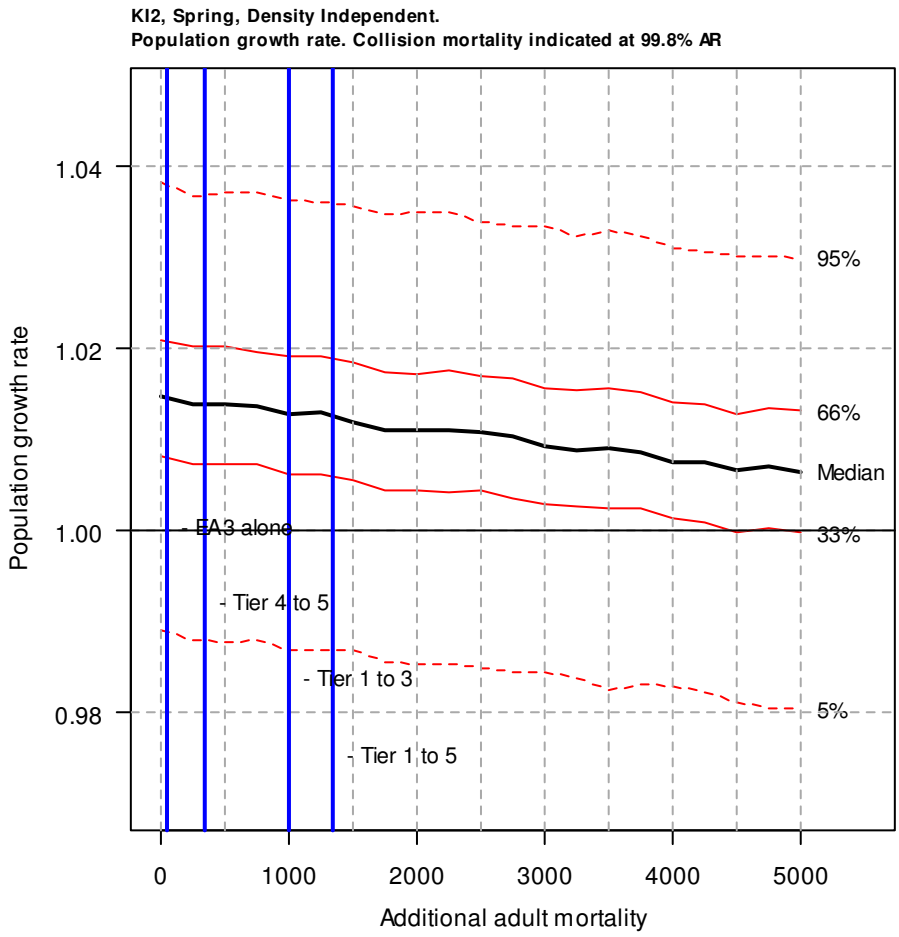

Figure 108 Kittiwake: Density independent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

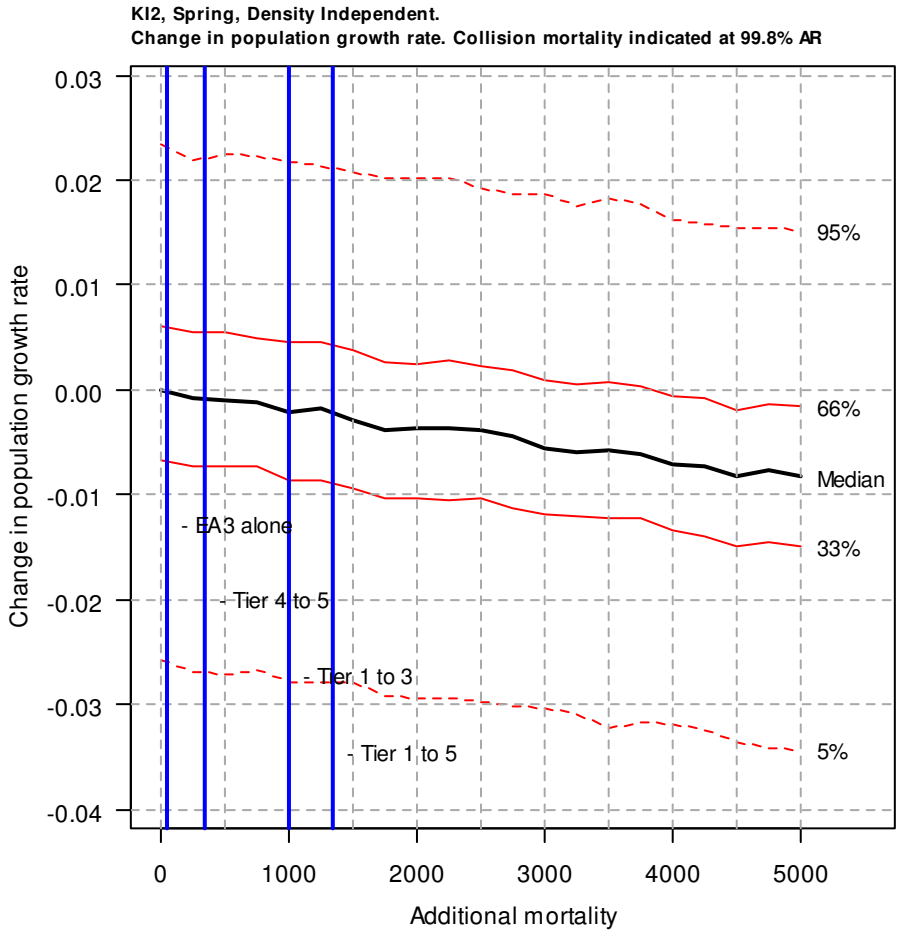

Figure 109 Kittiwake: Density independent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

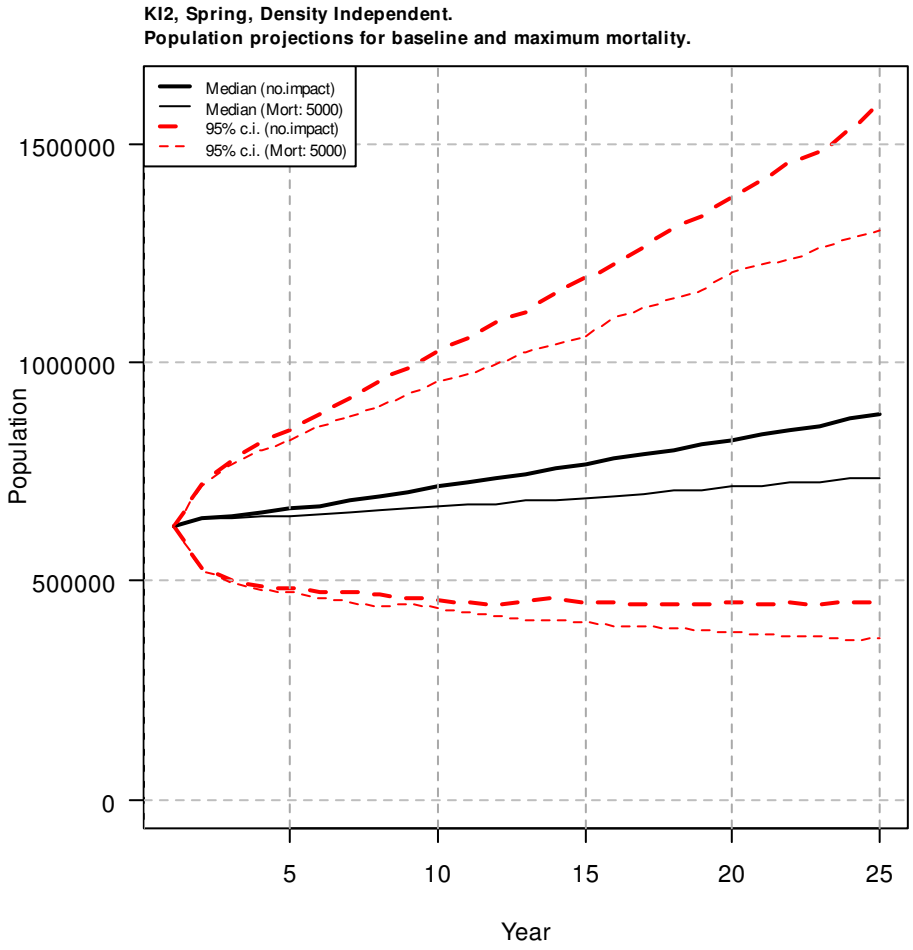

Figure 110 Kittiwake: Density independent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

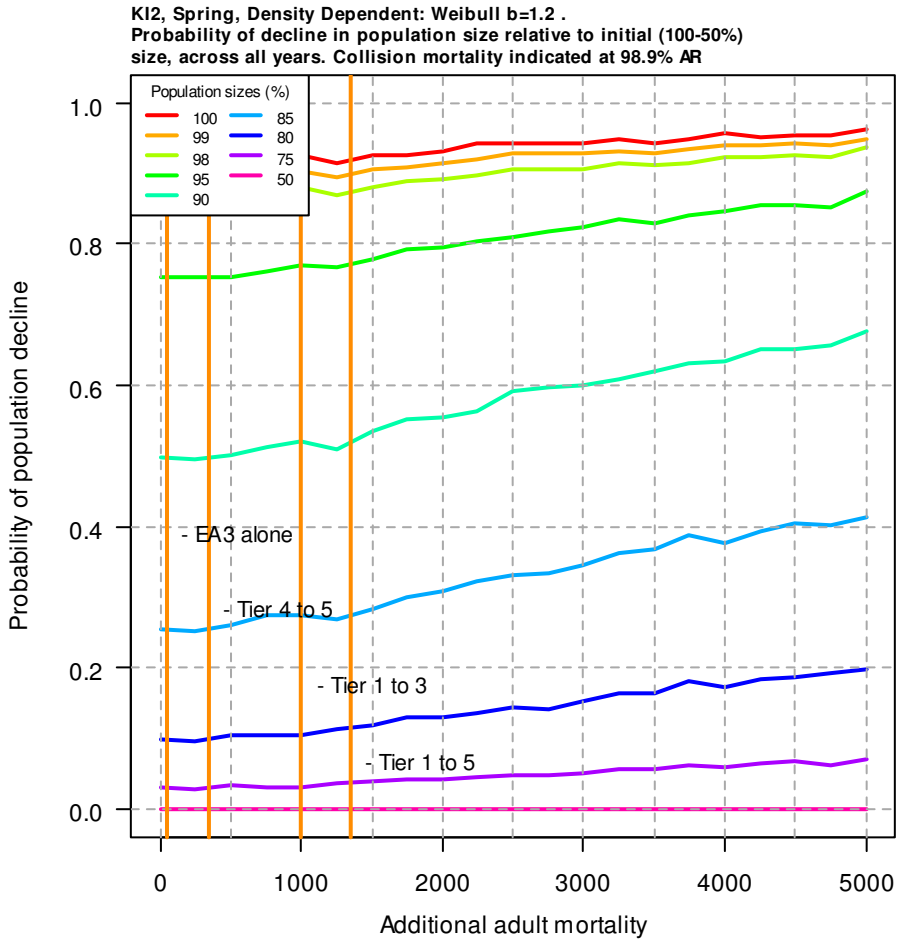

Figure 111 Kittiwake - Spring: Density dependent model. Probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

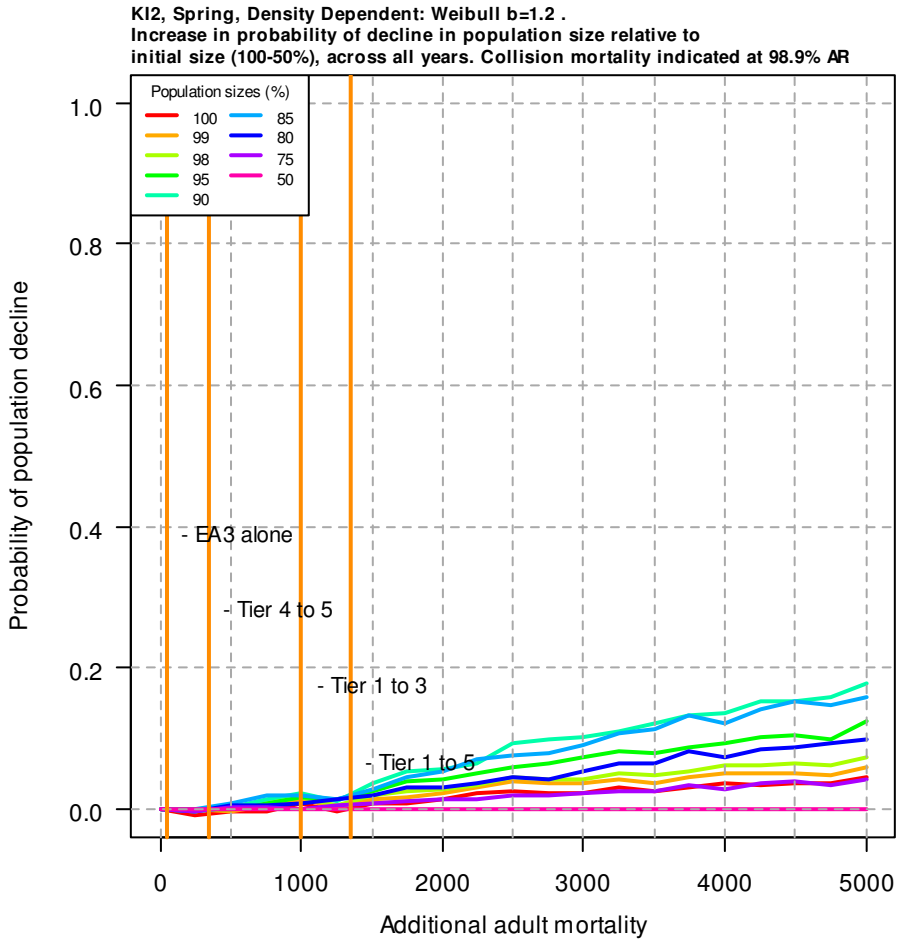

Figure 112 Kittiwake - Spring: Density dependent model. Increase in probability of decline relative to initial size. Collision mortality indicated at a 98.9% avoidance rate.

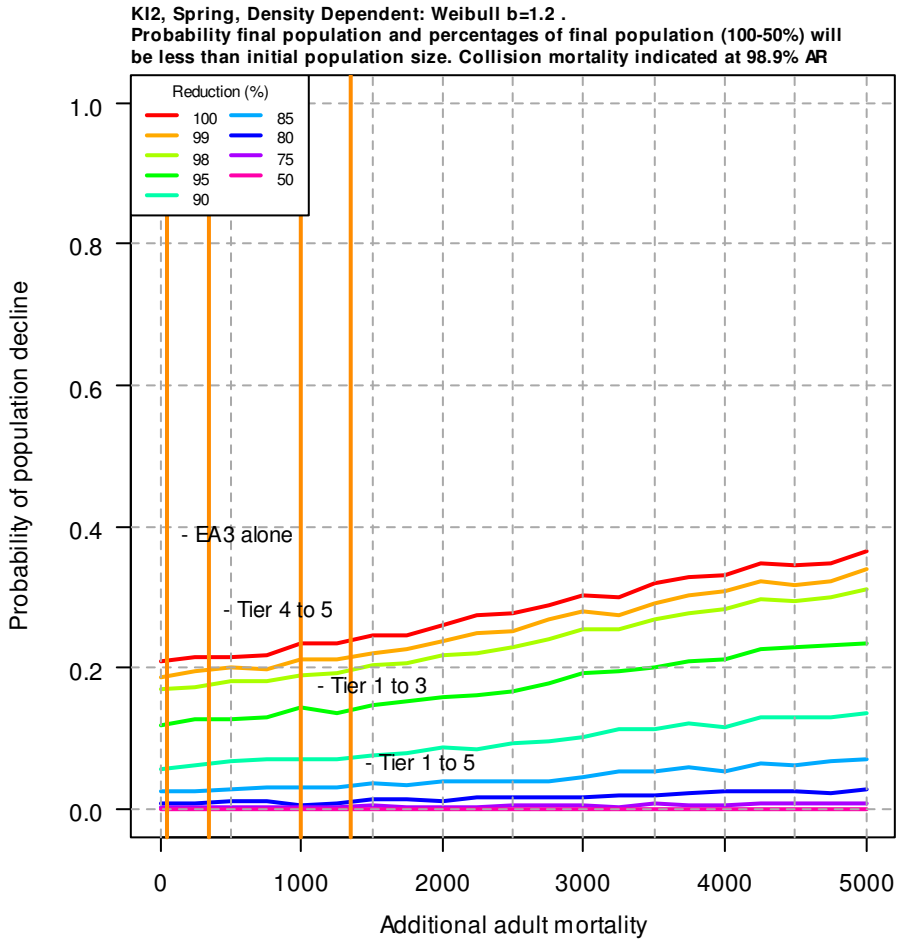

Figure 113 Kittiwake - Spring: Density dependent model. Probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

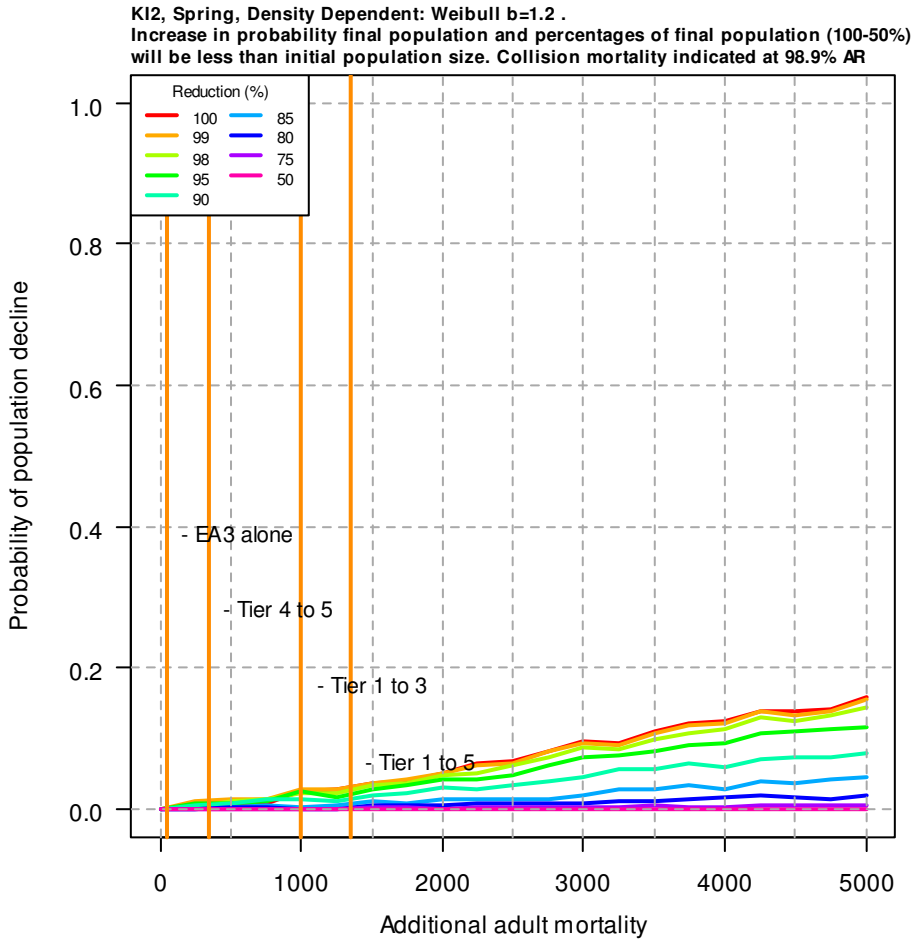

Figure 114 Kittiwake - Spring: Density dependent model. Increase in probability final population size will be less than initial size. Collision mortality indicated at a 98.9% avoidance rate.

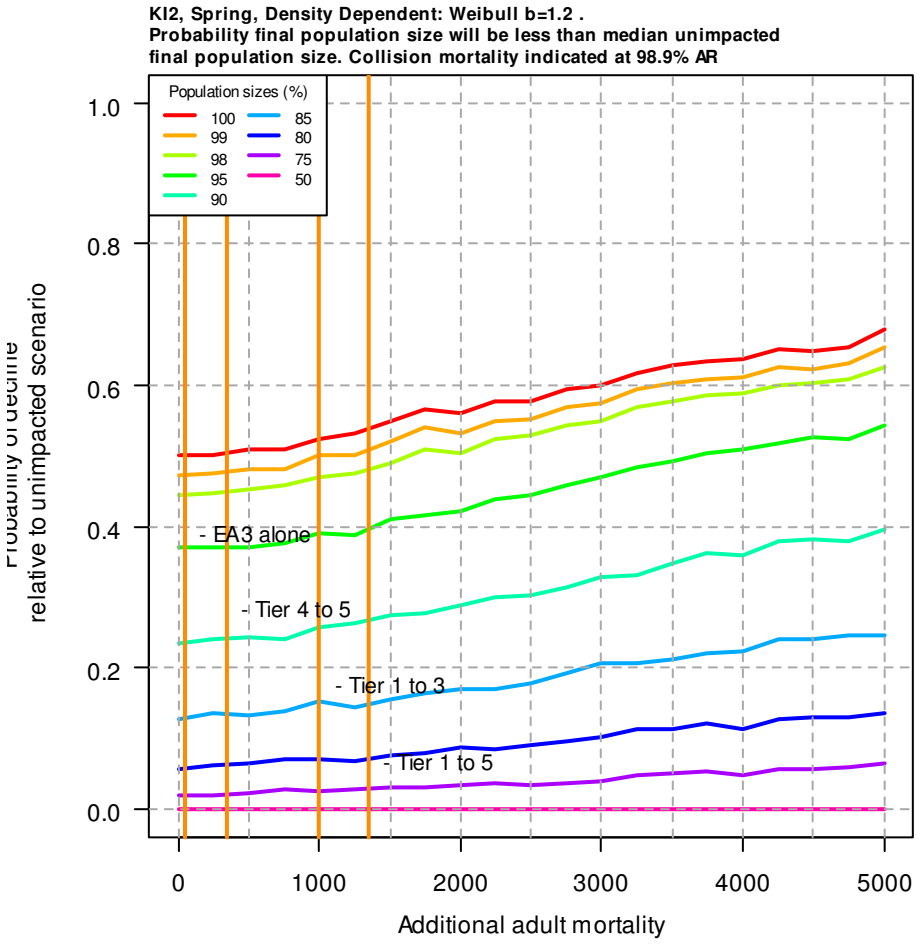

Figure 115 Kittiwake - Spring: Density dependent model. Probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

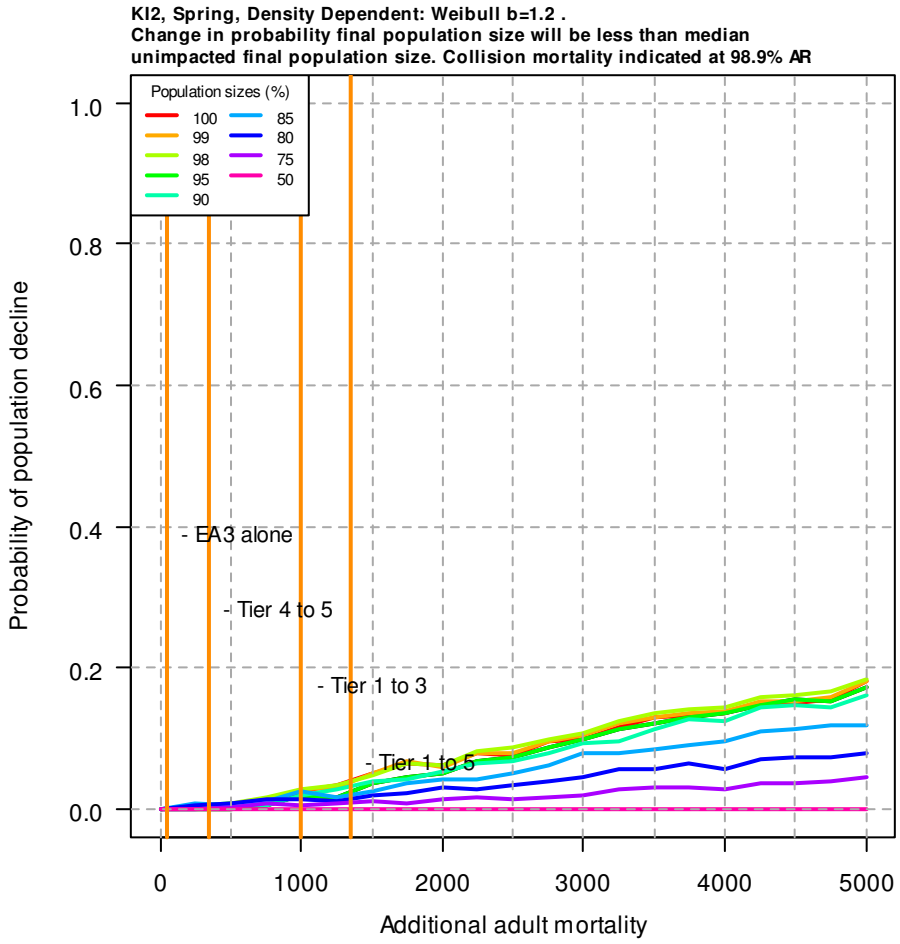

Figure 116 Kittiwake - Spring: Density dependent model. Change in probability final population size will be less than the median unimpacted population size. Collision mortality indicated at a 98.9% avoidance rate.

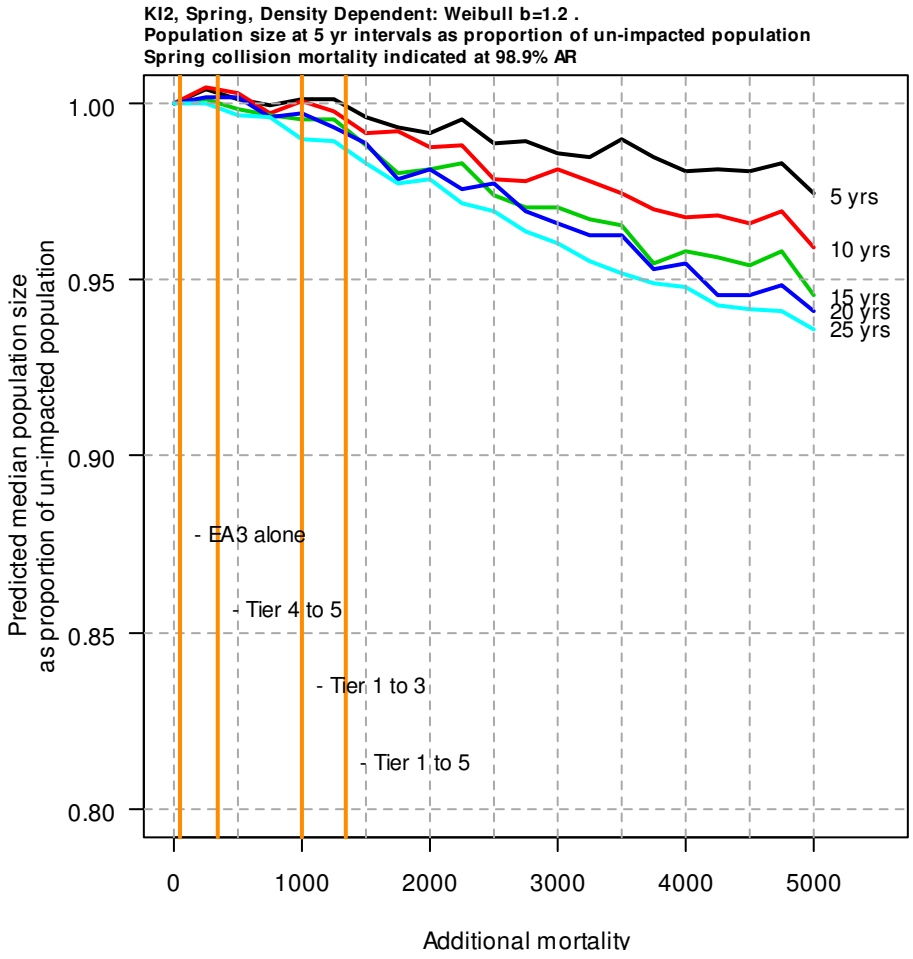

Figure 117 Kittiwake - Spring: Density dependent model. Median population size at 5 year intervals as a proportion of un-impacted median population size. Collision mortality indicated at a 98.9% avoidance rate.

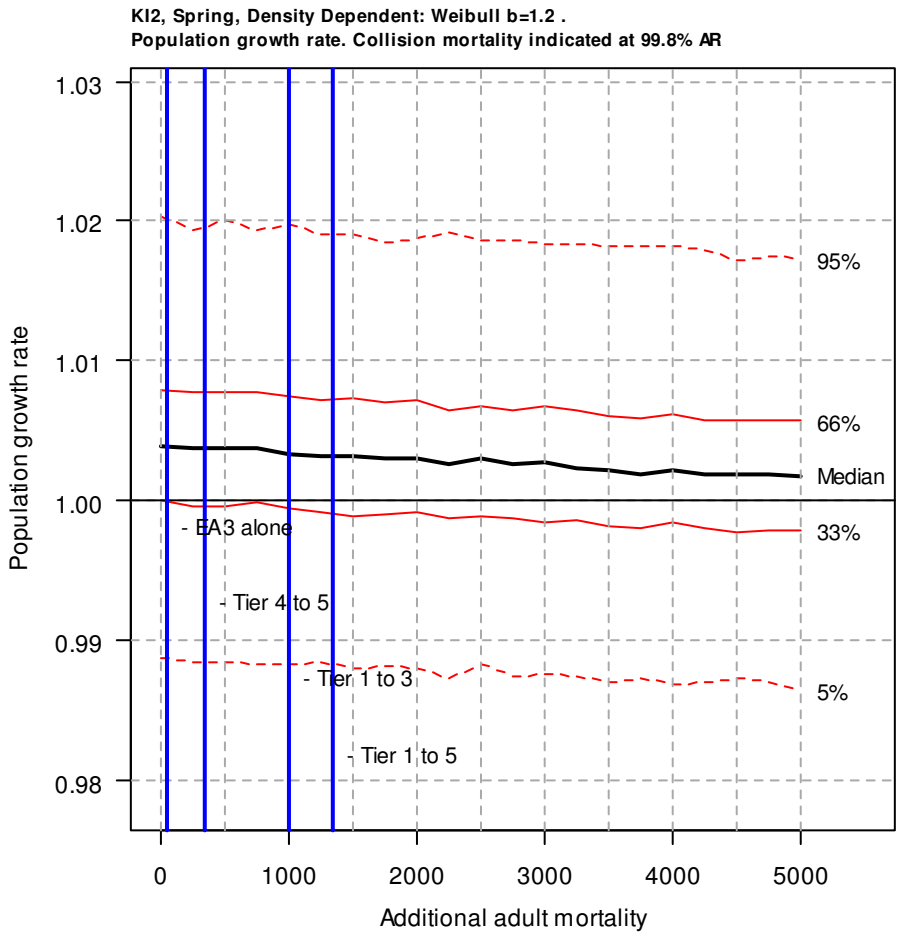

Figure 118 Kittiwake: Density dependent model. Population growth rate, collision mortality indicated at a 98.9% avoidance rate.

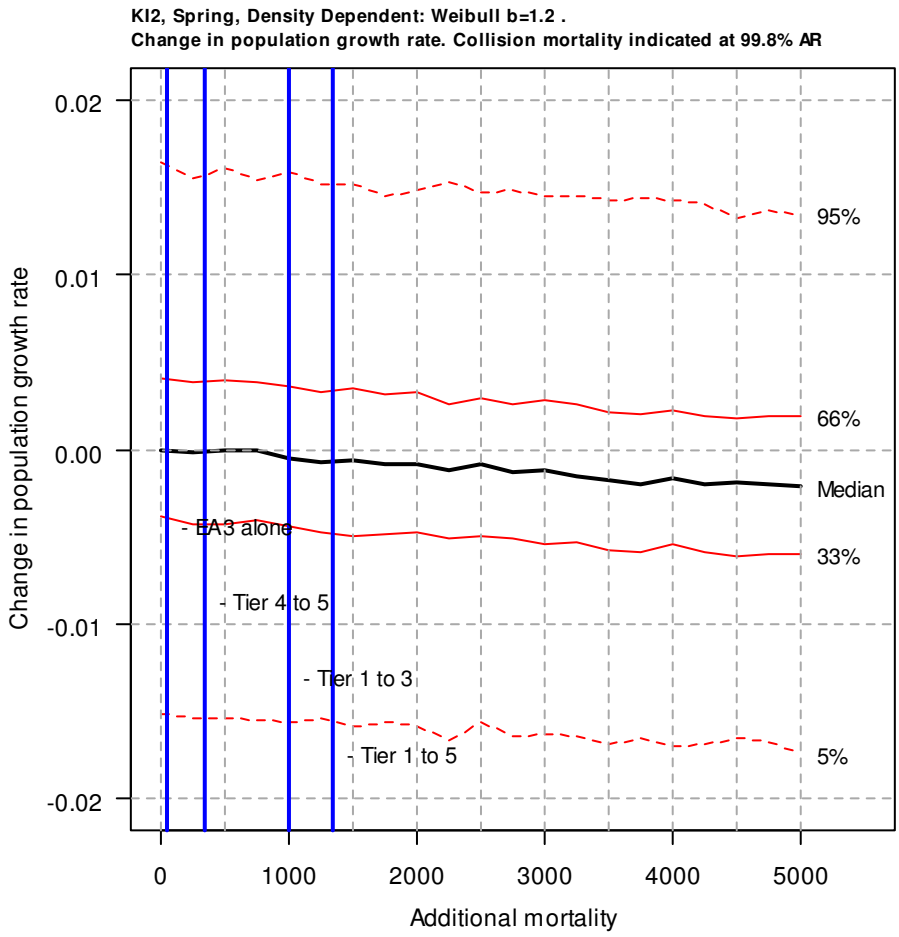

Figure 119 Kittiwake: Density dependent model. Change in population growth rate, collision mortality indicated at a 98.9% avoidance rate.

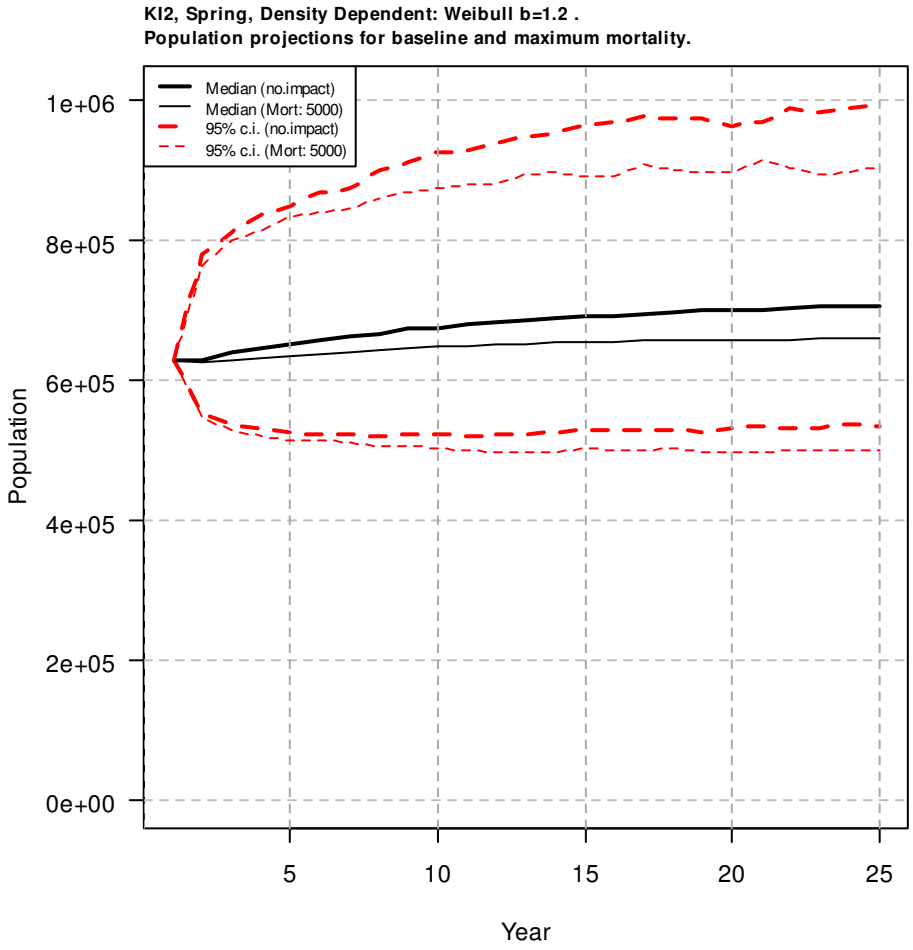

Figure 120 Kittiwake: Density dependent model. Baseline and maximum impact population projections, median and 95% confidence intervals.

7 ANNEX 2 - TABLES

Key to table numbers.

Figure numbers	Parameter set	Period	Type
1 to 9	KI1	Annual	Density independent
10 to 18			Density dependent
19 to 27		Autumn	Density independent
28 to 36			Density dependent
37 to 45		Spring	Density independent
46 to 54			Density dependent
55 to 63	KI2	Annual	Density independent
64 to 72			Density dependent
73 to 81		Autumn	Density independent
82 to 90			Density dependent
91 to 99		Spring	Density independent
100 to 108			Density dependent

Tables for each model type are in the following order:

Order	Table content
1	Population growth rate
2	Change in population growth rate
3	Median population size at 5 year intervals
4	Probability of decline relative to initial size
5	Increase in probability of decline relative to initial size
6	Probability final population size will be less than initial size
7	Increase in probability final population size will be less than initial size
8	Probability final population size will be less than the median unimpacted population size
9	Change in probability final population size will be less than the median unimpacted population size

Table A2.1 KI1, Annual, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.036046988	1.006970110	1.060818244
250	1.035636411	1.007755495	1.060397548
500	1.035268129	1.006886206	1.060117405
750	1.034995872	1.005554769	1.059960155
1000	1.034840501	1.005494181	1.059612840
1250	1.034259206	1.006742804	1.058476730
1500	1.034236758	1.006470307	1.058973330
1750	1.034373787	1.006939738	1.058877565
2000	1.034153641	1.005226495	1.058169549
2250	1.033394828	1.005302752	1.057777848
2500	1.032990313	1.005323546	1.057284434
2750	1.032802089	1.003643654	1.057562438
3000	1.031966262	1.004329230	1.057516940
3250	1.032051217	1.003858571	1.056878417
3500	1.031752016	1.003947499	1.056014703
3750	1.031600017	1.004242401	1.055901711
4000	1.031590757	1.003665516	1.055417653
4250	1.030479999	1.002944808	1.056155593
4500	1.030428333	1.002438839	1.055318922
4750	1.030058736	1.002065796	1.053910413
5000	1.029969604	1.002039031	1.054940927

Table A2.2 KI1, Annual, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.00000000000000	0.0000000000000
250	-0.0004105769496	0.00078538503256	-0.0004206967456
500	-0.0007788595431	-0.00008390351608	-0.0007008392649
750	-0.0010511164849	-0.00141534093539	-0.0008580899240
1000	-0.0012064872657	-0.00147592819741	-0.0012054044840
1250	-0.0017877820290	-0.00022730533819	-0.0023415143462
1500	-0.0018102305477	-0.00049980296415	-0.0018449147305
1750	-0.0016732008943	-0.00003037202691	-0.0019406792394
2000	-0.0018933469406	-0.00174361497134	-0.0026486958232
2250	-0.0026521599919	-0.00166735749991	-0.0030403965317
2500	-0.0030566755665	-0.00164656410037	-0.0035338105466
2750	-0.0032448994409	-0.00332645575190	-0.0032558060541
3000	-0.0040807263970	-0.00264087918607	-0.0033013045749
3250	-0.0039957712183	-0.00311153852366	-0.0039398277582
3500	-0.0042949725697	-0.00302261053579	-0.0048035418546
3750	-0.0044469717204	-0.00272770884700	-0.0049165330865
4000	-0.0044562310739	-0.00330459350729	-0.0054005919077
4250	-0.0055669896538	-0.00402530148760	-0.0046626518455
4500	-0.0056186554530	-0.00453127037951	-0.0054993222266
4750	-0.0059882519606	-0.00490431378597	-0.0069078311299
5000	-0.0060773843948	-0.00493107819440	-0.0058773175449

Table A2.3 KI1, Annual, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	964191.0	1147211.0	1371131.0	1627649.0	1942244.5
250	963092.5	1146710.5	1363536.5	1613675.0	1927249.5
500	959853.0	1137230.0	1354435.5	1603987.5	1897526.0
750	957141.0	1128270.5	1342491.5	1591317.0	1880748.0
1000	962255.5	1134236.0	1343188.5	1586108.5	1882500.5
1250	956992.5	1134295.0	1337344.0	1584795.0	1848923.5
1500	958797.5	1126553.0	1335788.0	1570735.5	1860284.5
1750	953893.0	1126866.0	1319506.5	1568406.0	1860836.0
2000	954713.5	1118472.5	1315340.0	1554437.0	1831886.5
2250	956731.5	1125464.5	1313898.0	1545311.5	1811718.5
2500	949388.0	1112784.0	1300622.0	1532255.5	1785093.0
2750	951160.0	1113754.0	1302396.0	1524288.0	1786315.5
3000	954929.0	1111370.5	1295705.5	1529668.5	1769454.5
3250	952106.0	1105985.0	1302230.5	1515762.0	1775385.5
3500	945846.5	1094530.0	1277555.5	1494056.5	1751342.0
3750	944970.5	1100880.5	1283106.0	1498333.5	1736204.5
4000	948781.5	1102419.0	1279988.5	1491574.0	1740707.0
4250	948675.0	1095758.0	1274968.0	1480755.0	1710568.0
4500	945743.5	1099740.5	1275759.0	1467623.5	1704155.0
4750	942481.0	1092136.0	1261750.0	1459878.5	1691826.5
5000	941766.0	1080319.5	1252988.0	1449008.0	1683099.0

Table A2.4 KI1, Annual, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5168	0.4818	0.4456	0.3486	0.1980	0.0920	0.0384	0.0160	0.0000
250	0.5340	0.4986	0.4632	0.3572	0.2030	0.0898	0.0422	0.0190	0.0000
500	0.5328	0.5012	0.4688	0.3662	0.2092	0.0990	0.0412	0.0146	0.0000
750	0.5380	0.5068	0.4732	0.3704	0.2186	0.0982	0.0408	0.0130	0.0000
1000	0.5398	0.5036	0.4706	0.3728	0.2184	0.0960	0.0426	0.0150	0.0002
1250	0.5370	0.5060	0.4734	0.3682	0.2190	0.1058	0.0434	0.0174	0.0002
1500	0.5434	0.5128	0.4700	0.3682	0.2192	0.0968	0.0424	0.0162	0.0000
1750	0.5430	0.5078	0.4716	0.3776	0.2184	0.0970	0.0392	0.0172	0.0000
2000	0.5438	0.5114	0.4778	0.3834	0.2326	0.1118	0.0458	0.0178	0.0000
2250	0.5462	0.5132	0.4828	0.3780	0.2214	0.1072	0.0448	0.0184	0.0002
2500	0.5718	0.5392	0.5060	0.4030	0.2412	0.1104	0.0494	0.0206	0.0000
2750	0.5558	0.5234	0.4896	0.3888	0.2372	0.1078	0.0494	0.0222	0.0000
3000	0.5488	0.5152	0.4808	0.3778	0.2300	0.1124	0.0512	0.0222	0.0000
3250	0.5722	0.5378	0.4970	0.3874	0.2332	0.1134	0.0502	0.0210	0.0002
3500	0.5660	0.5328	0.5034	0.4070	0.2546	0.1258	0.0624	0.0274	0.0000
3750	0.5674	0.5286	0.4960	0.3970	0.2428	0.1158	0.0500	0.0244	0.0000
4000	0.5704	0.5358	0.5032	0.3990	0.2468	0.1146	0.0548	0.0224	0.0002
4250	0.5712	0.5372	0.5026	0.4030	0.2464	0.1254	0.0538	0.0232	0.0004
4500	0.5698	0.5400	0.5054	0.4068	0.2528	0.1290	0.0590	0.0246	0.0000
4750	0.5844	0.5500	0.5130	0.4138	0.2558	0.1222	0.0590	0.0230	0.0000
5000	0.5896	0.5570	0.5280	0.4192	0.2566	0.1260	0.0574	0.0242	0.0000

Table A2.5 KI1, Annual, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0172	0.0168	0.0176	0.0086	0.0050	-0.0022	0.0038	0.0030	0.0000
500	0.0160	0.0194	0.0232	0.0176	0.0112	0.0070	0.0028	-0.0014	0.0000
750	0.0212	0.0250	0.0276	0.0218	0.0206	0.0062	0.0024	-0.0030	0.0000
1000	0.0230	0.0218	0.0250	0.0242	0.0204	0.0040	0.0042	-0.0010	0.0002
1250	0.0202	0.0242	0.0278	0.0196	0.0210	0.0138	0.0050	0.0014	0.0002
1500	0.0266	0.0310	0.0244	0.0196	0.0212	0.0048	0.0040	0.0002	0.0000
1750	0.0262	0.0260	0.0260	0.0290	0.0204	0.0050	0.0008	0.0012	0.0000
2000	0.0270	0.0296	0.0322	0.0348	0.0346	0.0198	0.0074	0.0018	0.0000
2250	0.0294	0.0314	0.0372	0.0294	0.0234	0.0152	0.0064	0.0024	0.0002
2500	0.0550	0.0574	0.0604	0.0544	0.0432	0.0184	0.0110	0.0046	0.0000
2750	0.0390	0.0416	0.0440	0.0402	0.0392	0.0158	0.0110	0.0062	0.0000
3000	0.0320	0.0334	0.0352	0.0292	0.0320	0.0204	0.0128	0.0062	0.0000
3250	0.0554	0.0560	0.0514	0.0388	0.0352	0.0214	0.0118	0.0050	0.0002
3500	0.0492	0.0510	0.0578	0.0584	0.0566	0.0338	0.0240	0.0114	0.0000
3750	0.0506	0.0468	0.0504	0.0484	0.0448	0.0238	0.0116	0.0084	0.0000
4000	0.0536	0.0540	0.0576	0.0504	0.0488	0.0226	0.0164	0.0064	0.0002
4250	0.0544	0.0554	0.0570	0.0544	0.0484	0.0334	0.0154	0.0072	0.0004
4500	0.0530	0.0582	0.0598	0.0582	0.0548	0.0370	0.0206	0.0086	0.0000
4750	0.0676	0.0682	0.0674	0.0652	0.0578	0.0302	0.0206	0.0070	0.0000
5000	0.0728	0.0752	0.0824	0.0706	0.0586	0.0340	0.0190	0.0082	0.0000

Table A2.6 KI1, Annual, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0032	0.0030	0.0028	0.0018	0.0010	0.0006	0.0004	0.0002	0.0000
250	0.0026	0.0024	0.0022	0.0018	0.0012	0.0002	0.0002	0.0002	0.0000
500	0.0034	0.0030	0.0022	0.0012	0.0002	0.0000	0.0000	0.0000	0.0000
750	0.0048	0.0046	0.0044	0.0026	0.0016	0.0014	0.0002	0.0002	0.0000
1000	0.0048	0.0040	0.0030	0.0026	0.0014	0.0006	0.0006	0.0004	0.0000
1250	0.0044	0.0036	0.0032	0.0022	0.0016	0.0008	0.0006	0.0002	0.0000
1500	0.0050	0.0046	0.0044	0.0038	0.0022	0.0010	0.0004	0.0004	0.0000
1750	0.0052	0.0048	0.0042	0.0036	0.0018	0.0008	0.0004	0.0000	0.0000
2000	0.0046	0.0042	0.0038	0.0036	0.0018	0.0014	0.0004	0.0002	0.0000
2250	0.0050	0.0050	0.0046	0.0040	0.0018	0.0006	0.0002	0.0000	0.0000
2500	0.0054	0.0052	0.0040	0.0034	0.0022	0.0014	0.0004	0.0000	0.0000
2750	0.0070	0.0064	0.0054	0.0036	0.0024	0.0020	0.0012	0.0006	0.0000
3000	0.0078	0.0076	0.0074	0.0062	0.0030	0.0024	0.0008	0.0006	0.0000
3250	0.0066	0.0058	0.0054	0.0030	0.0026	0.0016	0.0012	0.0006	0.0000
3500	0.0068	0.0062	0.0058	0.0044	0.0038	0.0020	0.0008	0.0008	0.0000
3750	0.0074	0.0072	0.0070	0.0046	0.0032	0.0024	0.0012	0.0006	0.0000
4000	0.0062	0.0050	0.0040	0.0024	0.0018	0.0014	0.0004	0.0002	0.0000
4250	0.0100	0.0098	0.0090	0.0068	0.0034	0.0024	0.0018	0.0010	0.0002
4500	0.0110	0.0098	0.0092	0.0076	0.0036	0.0024	0.0008	0.0004	0.0000
4750	0.0132	0.0118	0.0112	0.0080	0.0050	0.0034	0.0020	0.0014	0.0000
5000	0.0096	0.0092	0.0088	0.0068	0.0038	0.0016	0.0010	0.0008	0.0000

Table A2.7 KI1, Annual, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0006	-0.0006	-0.0006	0.0000	0.0002	-0.0004	-0.0002	0.0000	0.0000
500	0.0002	0.0000	-0.0006	-0.0006	-0.0008	-0.0006	-0.0004	-0.0002	0.0000
750	0.0016	0.0016	0.0016	0.0008	0.0006	0.0008	-0.0002	0.0000	0.0000
1000	0.0016	0.0010	0.0002	0.0008	0.0004	0.0000	0.0002	0.0002	0.0000
1250	0.0012	0.0006	0.0004	0.0004	0.0006	0.0002	0.0002	0.0000	0.0000
1500	0.0018	0.0016	0.0016	0.0020	0.0012	0.0004	0.0000	0.0002	0.0000
1750	0.0020	0.0018	0.0014	0.0018	0.0008	0.0002	0.0000	-0.0002	0.0000
2000	0.0014	0.0012	0.0010	0.0018	0.0008	0.0008	0.0000	0.0000	0.0000
2250	0.0018	0.0020	0.0018	0.0022	0.0008	0.0000	-0.0002	-0.0002	0.0000
2500	0.0022	0.0022	0.0012	0.0016	0.0012	0.0008	0.0000	-0.0002	0.0000
2750	0.0038	0.0034	0.0026	0.0018	0.0014	0.0014	0.0008	0.0004	0.0000
3000	0.0046	0.0046	0.0046	0.0044	0.0020	0.0018	0.0004	0.0004	0.0000
3250	0.0034	0.0028	0.0026	0.0012	0.0016	0.0010	0.0008	0.0004	0.0000
3500	0.0036	0.0032	0.0030	0.0026	0.0028	0.0014	0.0004	0.0006	0.0000
3750	0.0042	0.0042	0.0042	0.0028	0.0022	0.0018	0.0008	0.0004	0.0000
4000	0.0030	0.0020	0.0012	0.0006	0.0008	0.0008	0.0000	0.0000	0.0000
4250	0.0068	0.0068	0.0062	0.0050	0.0024	0.0018	0.0014	0.0008	0.0002
4500	0.0078	0.0068	0.0064	0.0058	0.0026	0.0018	0.0004	0.0002	0.0000
4750	0.0100	0.0088	0.0084	0.0062	0.0040	0.0028	0.0016	0.0012	0.0000
5000	0.0064	0.0062	0.0060	0.0050	0.0028	0.0010	0.0006	0.0006	0.0000

Table A2.8 KI1, Annual, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4862	0.4710	0.4298	0.3556	0.2880	0.2212	0.1668	0.0112
250	0.5090	0.4980	0.4858	0.4406	0.3642	0.2918	0.2302	0.1680	0.0112
500	0.5314	0.5154	0.5038	0.4560	0.3796	0.3120	0.2476	0.1780	0.0144
750	0.5428	0.5280	0.5174	0.4724	0.3900	0.3180	0.2482	0.1892	0.0180
1000	0.5476	0.5312	0.5178	0.4708	0.4000	0.3214	0.2510	0.1892	0.0180
1250	0.5670	0.5514	0.5358	0.4964	0.4182	0.3406	0.2682	0.1960	0.0146
1500	0.5654	0.5518	0.5364	0.4884	0.4110	0.3354	0.2658	0.1976	0.0162
1750	0.5614	0.5438	0.5316	0.4882	0.4118	0.3414	0.2684	0.2044	0.0158
2000	0.5802	0.5662	0.5540	0.5102	0.4360	0.3606	0.2810	0.2158	0.0190
2250	0.5924	0.5776	0.5646	0.5248	0.4472	0.3670	0.2898	0.2196	0.0198
2500	0.6152	0.6036	0.5916	0.5486	0.4644	0.3812	0.3128	0.2354	0.0186
2750	0.6182	0.6038	0.5872	0.5468	0.4770	0.3970	0.3166	0.2398	0.0254
3000	0.6332	0.6198	0.6054	0.5580	0.4784	0.3980	0.3134	0.2378	0.0224
3250	0.6322	0.6198	0.6046	0.5560	0.4810	0.3968	0.3220	0.2434	0.0226
3500	0.6498	0.6368	0.6214	0.5794	0.4978	0.4236	0.3430	0.2684	0.0264
3750	0.6554	0.6406	0.6276	0.5828	0.5098	0.4268	0.3410	0.2650	0.0242
4000	0.6528	0.6396	0.6270	0.5784	0.5040	0.4294	0.3504	0.2652	0.0260
4250	0.6770	0.6642	0.6470	0.6012	0.5280	0.4508	0.3654	0.2932	0.0294
4500	0.6834	0.6704	0.6556	0.6122	0.5374	0.4566	0.3714	0.2940	0.0330
4750	0.6936	0.6794	0.6682	0.6276	0.5526	0.4690	0.3842	0.3094	0.0348
5000	0.7090	0.6966	0.6840	0.6368	0.5540	0.4756	0.3944	0.3114	0.0326

Table A2.9 KI1, Annual, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0090	0.0118	0.0148	0.0108	0.0086	0.0038	0.0090	0.0012	0.0000
500	0.0314	0.0292	0.0328	0.0262	0.0240	0.0240	0.0264	0.0112	0.0032
750	0.0428	0.0418	0.0464	0.0426	0.0344	0.0300	0.0270	0.0224	0.0068
1000	0.0476	0.0450	0.0468	0.0410	0.0444	0.0334	0.0298	0.0224	0.0068
1250	0.0670	0.0652	0.0648	0.0666	0.0626	0.0526	0.0470	0.0292	0.0034
1500	0.0654	0.0656	0.0654	0.0586	0.0554	0.0474	0.0446	0.0308	0.0050
1750	0.0614	0.0576	0.0606	0.0584	0.0562	0.0534	0.0472	0.0376	0.0046
2000	0.0802	0.0800	0.0830	0.0804	0.0804	0.0726	0.0598	0.0490	0.0078
2250	0.0924	0.0914	0.0936	0.0950	0.0916	0.0790	0.0686	0.0528	0.0086
2500	0.1152	0.1174	0.1206	0.1188	0.1088	0.0932	0.0916	0.0686	0.0074
2750	0.1182	0.1176	0.1162	0.1170	0.1214	0.1090	0.0954	0.0730	0.0142
3000	0.1332	0.1336	0.1344	0.1282	0.1228	0.1100	0.0922	0.0710	0.0112
3250	0.1322	0.1336	0.1336	0.1262	0.1254	0.1088	0.1008	0.0766	0.0114
3500	0.1498	0.1506	0.1504	0.1496	0.1422	0.1356	0.1218	0.1016	0.0152
3750	0.1554	0.1544	0.1566	0.1530	0.1542	0.1388	0.1198	0.0982	0.0130
4000	0.1528	0.1534	0.1560	0.1486	0.1484	0.1414	0.1292	0.0984	0.0148
4250	0.1770	0.1780	0.1760	0.1714	0.1724	0.1628	0.1442	0.1264	0.0182
4500	0.1834	0.1842	0.1846	0.1824	0.1818	0.1686	0.1502	0.1272	0.0218
4750	0.1936	0.1932	0.1972	0.1978	0.1970	0.1810	0.1630	0.1426	0.0236
5000	0.2090	0.2104	0.2130	0.2070	0.1984	0.1876	0.1732	0.1446	0.0214

Table A2.10 KI1, Annual, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.002467197	0.9849378402	1.021826205
250	1.002547984	0.9845949723	1.021412176
500	1.002563183	0.9849195344	1.021864182
750	1.002380310	0.9851096689	1.021656862
1000	1.002270607	0.9849709183	1.021214861
1250	1.002187187	0.9841518165	1.021096376
1500	1.002076470	0.9839405879	1.021454686
1750	1.002165778	0.9846381434	1.020834794
2000	1.001994796	0.9848269663	1.021436194
2250	1.001808888	0.9835515886	1.020880243
2500	1.001855301	0.9840867493	1.020349452
2750	1.001972104	0.9845488600	1.021530926
3000	1.001445918	0.9836801695	1.020592852
3250	1.001423215	0.9837935657	1.020312098
3500	1.001527565	0.9844171277	1.019834560
3750	1.001447965	0.9840627001	1.020609746
4000	1.001556807	0.9835951193	1.020167146
4250	1.001474881	0.9841236315	1.019901974
4500	1.000874763	0.9837039068	1.019229826
4750	1.001457712	0.9844482141	1.020146013
5000	1.001230174	0.9838085748	1.019542782

Table A2.11 KI1, Annual, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.00000000000000	0.00000000000000	0.00000000000000
250	0.00008078770737	-0.00034286792049	-0.00041402881937
500	0.00009598638319	-0.00001830585177	0.00003797714664
750	-0.00008688703457	0.00017182866268	-0.00016934318256
1000	-0.00019658958804	0.00003307807154	-0.00061134415791
1250	-0.00028001010965	-0.00078602374871	-0.00072982923822
1500	-0.00039072633279	-0.00099725234860	-0.00037151852189
1750	-0.00030141902684	-0.00029969683949	-0.00099141064041
2000	-0.00047240060207	-0.00011087391376	-0.00039001066107
2250	-0.00065830844486	-0.00138625166819	-0.00094596134783
2500	-0.00061189520444	-0.00085109090592	-0.00147675295967
2750	-0.00049509238375	-0.00038898027382	-0.00029527890538
3000	-0.00102127853286	-0.00125767071608	-0.00123335292545
3250	-0.00104398178590	-0.00114427458134	-0.00151410663098
3500	-0.00093963201743	-0.00052071255984	-0.00199164460994
3750	-0.00101923208335	-0.00087514011310	-0.00121645929553
4000	-0.00091038965708	-0.00134272095855	-0.00165905845681
4250	-0.00099231552856	-0.00081420871986	-0.00192423114559
4500	-0.00159243386982	-0.00123393347727	-0.00259637902628
4750	-0.00100948418120	-0.00048962613684	-0.00168019172832
5000	-0.00123702269982	-0.00112926548864	-0.00228342265770

Table A2.12 KI1, Annual, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	829439.0	856628.5	870625.0	873090.0	876413.5
250	830264.5	855832.5	864590.0	875464.5	879439.0
500	830496.0	852247.5	863813.0	870704.5	877872.0
750	829416.0	847521.5	859184.5	868185.0	872699.5
1000	828170.5	849202.5	856491.5	863959.0	870779.0
1250	830790.0	847775.5	858441.5	862833.5	865865.0
1500	831962.5	850095.0	857704.0	862902.5	870505.0
1750	826021.5	843434.5	849167.0	864249.5	864259.0
2000	827010.0	845484.5	853235.0	860800.0	863998.0
2250	825911.0	839253.0	849280.5	857415.0	857486.5
2500	823539.0	841439.5	851942.0	859988.5	857988.0
2750	824668.0	836808.0	848388.5	853434.0	858584.0
3000	825486.5	842348.0	847624.0	851233.0	851075.0
3250	825020.0	838705.0	846820.5	851375.0	851341.5
3500	822565.0	838248.0	843057.0	850745.5	851254.5
3750	822660.5	836102.5	842210.0	844989.5	851143.5
4000	819600.5	833604.0	842277.0	846103.0	847803.0
4250	818728.0	831835.5	840330.5	840931.0	845058.0
4500	819467.0	831753.5	835207.0	842852.0	839914.0
4750	813231.0	828976.5	835573.5	839841.5	841179.5
5000	815464.0	828824.5	833760.5	837165.5	839396.5

Table A2.13 KI1, Annual, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9788	0.9678	0.9544	0.8952	0.6654	0.3624	0.1298	0.0292	0
250	0.9768	0.9676	0.9598	0.9022	0.6770	0.3652	0.1426	0.0320	0
500	0.9776	0.9690	0.9572	0.8936	0.6812	0.3770	0.1466	0.0346	0
750	0.9800	0.9708	0.9602	0.9026	0.6900	0.3898	0.1506	0.0352	0
1000	0.9810	0.9730	0.9622	0.9130	0.7004	0.4092	0.1628	0.0382	0
1250	0.9806	0.9724	0.9600	0.9094	0.7018	0.4042	0.1658	0.0372	0
1500	0.9776	0.9704	0.9560	0.9032	0.6992	0.4064	0.1678	0.0464	0
1750	0.9792	0.9732	0.9644	0.9134	0.7198	0.4260	0.1752	0.0482	0
2000	0.9808	0.9744	0.9646	0.9190	0.7240	0.4250	0.1736	0.0436	0
2250	0.9854	0.9788	0.9706	0.9196	0.7422	0.4564	0.1888	0.0514	0
2500	0.9830	0.9760	0.9664	0.9252	0.7350	0.4386	0.1822	0.0504	0
2750	0.9868	0.9788	0.9706	0.9204	0.7506	0.4654	0.2006	0.0492	0
3000	0.9830	0.9758	0.9672	0.9242	0.7488	0.4506	0.1952	0.0522	0
3250	0.9826	0.9752	0.9662	0.9224	0.7526	0.4760	0.2064	0.0610	0
3500	0.9868	0.9816	0.9734	0.9282	0.7618	0.4802	0.2106	0.0612	0
3750	0.9854	0.9812	0.9730	0.9268	0.7576	0.4850	0.2288	0.0680	0
4000	0.9856	0.9820	0.9746	0.9374	0.7742	0.4960	0.2238	0.0638	0
4250	0.9860	0.9810	0.9764	0.9398	0.7806	0.5028	0.2352	0.0730	0
4500	0.9884	0.9846	0.9792	0.9434	0.7886	0.5106	0.2334	0.0698	0
4750	0.9920	0.9898	0.9844	0.9520	0.8070	0.5226	0.2492	0.0784	0
5000	0.9926	0.9888	0.9832	0.9502	0.7986	0.5260	0.2400	0.0754	0

Table A2.14 KI1, Annual, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	-0.0020	-0.0002	0.0054	0.0070	0.0116	0.0028	0.0128	0.0028	0
500	-0.0012	0.0012	0.0028	-0.0016	0.0158	0.0146	0.0168	0.0054	0
750	0.0012	0.0030	0.0058	0.0074	0.0246	0.0274	0.0208	0.0060	0
1000	0.0022	0.0052	0.0078	0.0178	0.0350	0.0468	0.0330	0.0090	0
1250	0.0018	0.0046	0.0056	0.0142	0.0364	0.0418	0.0360	0.0080	0
1500	-0.0012	0.0026	0.0016	0.0080	0.0338	0.0440	0.0380	0.0172	0
1750	0.0004	0.0054	0.0100	0.0182	0.0544	0.0636	0.0454	0.0190	0
2000	0.0020	0.0066	0.0102	0.0238	0.0586	0.0626	0.0438	0.0144	0
2250	0.0066	0.0110	0.0162	0.0244	0.0768	0.0940	0.0590	0.0222	0
2500	0.0042	0.0082	0.0120	0.0300	0.0696	0.0762	0.0524	0.0212	0
2750	0.0080	0.0110	0.0162	0.0252	0.0852	0.1030	0.0708	0.0200	0
3000	0.0042	0.0080	0.0128	0.0290	0.0834	0.0882	0.0654	0.0230	0
3250	0.0038	0.0074	0.0118	0.0272	0.0872	0.1136	0.0766	0.0318	0
3500	0.0080	0.0138	0.0190	0.0330	0.0964	0.1178	0.0808	0.0320	0
3750	0.0066	0.0134	0.0186	0.0316	0.0922	0.1226	0.0990	0.0388	0
4000	0.0068	0.0142	0.0202	0.0422	0.1088	0.1336	0.0940	0.0346	0
4250	0.0072	0.0132	0.0220	0.0446	0.1152	0.1404	0.1054	0.0438	0
4500	0.0096	0.0168	0.0248	0.0482	0.1232	0.1482	0.1036	0.0406	0
4750	0.0132	0.0220	0.0300	0.0568	0.1416	0.1602	0.1194	0.0492	0
5000	0.0138	0.0210	0.0288	0.0550	0.1332	0.1636	0.1102	0.0462	0

Table A2.15 KI1, Annual, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.3324	0.3028	0.2728	0.2000	0.1014	0.0416	0.0148	0.0028	0
250	0.3416	0.3152	0.2882	0.2124	0.1086	0.0418	0.0130	0.0024	0
500	0.3388	0.3114	0.2808	0.2078	0.1122	0.0466	0.0144	0.0038	0
750	0.3608	0.3324	0.3040	0.2270	0.1184	0.0512	0.0154	0.0030	0
1000	0.3678	0.3394	0.3152	0.2350	0.1230	0.0514	0.0152	0.0030	0
1250	0.3704	0.3394	0.3152	0.2366	0.1336	0.0596	0.0204	0.0046	0
1500	0.3610	0.3390	0.3118	0.2370	0.1264	0.0560	0.0186	0.0056	0
1750	0.3790	0.3510	0.3254	0.2408	0.1306	0.0548	0.0168	0.0050	0
2000	0.3962	0.3650	0.3358	0.2544	0.1360	0.0560	0.0190	0.0028	0
2250	0.4004	0.3706	0.3440	0.2612	0.1430	0.0626	0.0198	0.0046	0
2500	0.3958	0.3656	0.3332	0.2602	0.1420	0.0646	0.0216	0.0046	0
2750	0.4080	0.3812	0.3522	0.2684	0.1496	0.0606	0.0212	0.0046	0
3000	0.4236	0.3942	0.3680	0.2820	0.1538	0.0676	0.0232	0.0058	0
3250	0.4266	0.3990	0.3724	0.2864	0.1578	0.0752	0.0264	0.0058	0
3500	0.4286	0.3984	0.3684	0.2864	0.1578	0.0750	0.0256	0.0060	0
3750	0.4322	0.4014	0.3756	0.2936	0.1688	0.0844	0.0308	0.0096	0
4000	0.4364	0.4100	0.3810	0.3028	0.1672	0.0802	0.0260	0.0068	0
4250	0.4442	0.4164	0.3872	0.2964	0.1708	0.0824	0.0280	0.0074	0
4500	0.4670	0.4428	0.4092	0.3210	0.1922	0.0858	0.0310	0.0090	0
4750	0.4602	0.4282	0.3954	0.3052	0.1802	0.0820	0.0300	0.0076	0
5000	0.4644	0.4352	0.4086	0.3202	0.1874	0.0894	0.0324	0.0090	0

Table A2.16 KI1, Annual, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0092	0.0124	0.0154	0.0124	0.0072	0.0002	-0.0018	-0.0004	0
500	0.0064	0.0086	0.0080	0.0078	0.0108	0.0050	-0.0004	0.0010	0
750	0.0284	0.0296	0.0312	0.0270	0.0170	0.0096	0.0006	0.0002	0
1000	0.0354	0.0366	0.0424	0.0350	0.0216	0.0098	0.0004	0.0002	0
1250	0.0380	0.0366	0.0424	0.0366	0.0322	0.0180	0.0056	0.0018	0
1500	0.0286	0.0362	0.0390	0.0370	0.0250	0.0144	0.0038	0.0028	0
1750	0.0466	0.0482	0.0526	0.0408	0.0292	0.0132	0.0020	0.0022	0
2000	0.0638	0.0622	0.0630	0.0544	0.0346	0.0144	0.0042	0.0000	0
2250	0.0680	0.0678	0.0712	0.0612	0.0416	0.0210	0.0050	0.0018	0
2500	0.0634	0.0628	0.0604	0.0602	0.0406	0.0230	0.0068	0.0018	0
2750	0.0756	0.0784	0.0794	0.0684	0.0482	0.0190	0.0064	0.0018	0
3000	0.0912	0.0914	0.0952	0.0820	0.0524	0.0260	0.0084	0.0030	0
3250	0.0942	0.0962	0.0996	0.0864	0.0564	0.0336	0.0116	0.0030	0
3500	0.0962	0.0956	0.0956	0.0864	0.0564	0.0334	0.0108	0.0032	0
3750	0.0998	0.0986	0.1028	0.0936	0.0674	0.0428	0.0160	0.0068	0
4000	0.1040	0.1072	0.1082	0.1028	0.0658	0.0386	0.0112	0.0040	0
4250	0.1118	0.1136	0.1144	0.0964	0.0694	0.0408	0.0132	0.0046	0
4500	0.1346	0.1400	0.1364	0.1210	0.0908	0.0442	0.0162	0.0062	0
4750	0.1278	0.1254	0.1226	0.1052	0.0788	0.0404	0.0152	0.0048	0
5000	0.1320	0.1324	0.1358	0.1202	0.0860	0.0478	0.0176	0.0062	0

Table A2.17 KI1, Annual, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4718	0.4380	0.3400	0.2010	0.0974	0.0376	0.0108	0
250	0.4902	0.4628	0.4414	0.3514	0.2128	0.1038	0.0382	0.0098	0
500	0.4958	0.4672	0.4378	0.3490	0.2090	0.1072	0.0420	0.0118	0
750	0.5130	0.4822	0.4538	0.3690	0.2282	0.1144	0.0442	0.0118	0
1000	0.5178	0.4902	0.4608	0.3764	0.2356	0.1196	0.0456	0.0124	0
1250	0.5346	0.5056	0.4776	0.3784	0.2384	0.1312	0.0534	0.0176	0
1500	0.5192	0.4906	0.4616	0.3700	0.2380	0.1232	0.0498	0.0150	0
1750	0.5406	0.5116	0.4818	0.3882	0.2420	0.1260	0.0474	0.0134	0
2000	0.5378	0.5092	0.4846	0.4048	0.2550	0.1308	0.0516	0.0146	0
2250	0.5572	0.5304	0.5034	0.4098	0.2616	0.1382	0.0568	0.0172	0
2500	0.5562	0.5304	0.5028	0.4040	0.2612	0.1360	0.0576	0.0168	0
2750	0.5578	0.5326	0.5012	0.4146	0.2692	0.1442	0.0530	0.0178	0
3000	0.5800	0.5534	0.5288	0.4360	0.2830	0.1480	0.0604	0.0180	0
3250	0.5752	0.5498	0.5224	0.4356	0.2874	0.1530	0.0670	0.0212	0
3500	0.5870	0.5596	0.5268	0.4398	0.2880	0.1514	0.0692	0.0204	0
3750	0.5848	0.5566	0.5260	0.4430	0.2946	0.1644	0.0762	0.0256	0
4000	0.6022	0.5688	0.5374	0.4460	0.3036	0.1626	0.0722	0.0228	0
4250	0.6068	0.5760	0.5466	0.4544	0.2976	0.1652	0.0740	0.0232	0
4500	0.6188	0.5934	0.5658	0.4770	0.3222	0.1858	0.0756	0.0264	0
4750	0.6140	0.5884	0.5624	0.4704	0.3060	0.1748	0.0750	0.0238	0
5000	0.6252	0.5988	0.5686	0.4736	0.3214	0.1816	0.0800	0.0272	0

Table A2.18 KI1, Annual, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	-0.0098	-0.0090	0.0034	0.0114	0.0118	0.0064	0.0006	-0.0010	0
500	-0.0042	-0.0046	-0.0002	0.0090	0.0080	0.0098	0.0044	0.0010	0
750	0.0130	0.0104	0.0158	0.0290	0.0272	0.0170	0.0066	0.0010	0
1000	0.0178	0.0184	0.0228	0.0364	0.0346	0.0222	0.0080	0.0016	0
1250	0.0346	0.0338	0.0396	0.0384	0.0374	0.0338	0.0158	0.0068	0
1500	0.0192	0.0188	0.0236	0.0300	0.0370	0.0258	0.0122	0.0042	0
1750	0.0406	0.0398	0.0438	0.0482	0.0410	0.0286	0.0098	0.0026	0
2000	0.0378	0.0374	0.0466	0.0648	0.0540	0.0334	0.0140	0.0038	0
2250	0.0572	0.0586	0.0654	0.0698	0.0606	0.0408	0.0192	0.0064	0
2500	0.0562	0.0586	0.0648	0.0640	0.0602	0.0386	0.0200	0.0060	0
2750	0.0578	0.0608	0.0632	0.0746	0.0682	0.0468	0.0154	0.0070	0
3000	0.0800	0.0816	0.0908	0.0960	0.0820	0.0506	0.0228	0.0072	0
3250	0.0752	0.0780	0.0844	0.0956	0.0864	0.0556	0.0294	0.0104	0
3500	0.0870	0.0878	0.0888	0.0998	0.0870	0.0540	0.0316	0.0096	0
3750	0.0848	0.0848	0.0880	0.1030	0.0936	0.0670	0.0386	0.0148	0
4000	0.1022	0.0970	0.0994	0.1060	0.1026	0.0652	0.0346	0.0120	0
4250	0.1068	0.1042	0.1086	0.1144	0.0966	0.0678	0.0364	0.0124	0
4500	0.1188	0.1216	0.1278	0.1370	0.1212	0.0884	0.0380	0.0156	0
4750	0.1140	0.1166	0.1244	0.1304	0.1050	0.0774	0.0374	0.0130	0
5000	0.1252	0.1270	0.1306	0.1336	0.1204	0.0842	0.0424	0.0164	0

Table A2.19 KI1, Autumn, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.035951297	1.008513701	1.060571487
250	1.036060620	1.007718961	1.060063293
500	1.035349328	1.007581279	1.059792318
750	1.035264333	1.007044278	1.060052176
1000	1.035221441	1.006441578	1.058578469
1250	1.034764107	1.004974061	1.059110821
1500	1.034314285	1.005278505	1.057995203
1750	1.033993945	1.006598235	1.059788234
2000	1.033457425	1.004842275	1.059260738
2250	1.033665855	1.005431113	1.059065511
2500	1.032878927	1.005083268	1.058002483
2750	1.032782753	1.005049432	1.057304281
3000	1.032121485	1.004535253	1.056727313
3250	1.032173044	1.004417415	1.056318135
3500	1.031209763	1.003626306	1.056479650
3750	1.031230469	1.001991488	1.055751255
4000	1.030943616	1.003393623	1.054973707
4250	1.030774005	1.002222581	1.055017749
4500	1.030423588	1.003100694	1.055168750
4750	1.029800961	1.002088581	1.054926322
5000	1.029595546	1.001684381	1.054536517

Table A2.20 KI1, Autumn, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.0000000000000	0.0000000000000
250	0.0001093226246	-0.0007947398345	-0.0005081938077
500	-0.0006019692096	-0.0009324222149	-0.0007791690106
750	-0.0006869641129	-0.0014694232308	-0.0005193110007
1000	-0.0007298561323	-0.0020721235771	-0.0019930181535
1250	-0.0011871899115	-0.0035396407401	-0.0014606663802
1500	-0.0016370121639	-0.0032351961510	-0.0025762839254
1750	-0.0019573518424	-0.0019154664848	-0.0007832529773
2000	-0.0024938727665	-0.0036714261662	-0.0013107488805
2250	-0.0022854427373	-0.0030825885550	-0.0015059760777
2500	-0.0030723699159	-0.0034304330324	-0.0025690036959
2750	-0.0031685445663	-0.0034642693314	-0.0032672059765
3000	-0.0038298123315	-0.0039784486981	-0.0038441738312
3250	-0.0037782528094	-0.0040962862970	-0.0042533520784
3500	-0.0047415343988	-0.0048873951903	-0.0040918374700
3750	-0.0047208286183	-0.0065222136678	-0.0048202323175
4000	-0.0050076817612	-0.0051200786987	-0.0055977795988
4250	-0.0051772918534	-0.0062911205942	-0.0055537378843
4500	-0.0055277096802	-0.0054130067961	-0.0054027366537
4750	-0.0061503358183	-0.0064251204265	-0.0056451646605
5000	-0.0063557512711	-0.0068293202472	-0.0060349696388

Table A2.21 KI1, Autumn, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	961101.0	1145001.0	1368454.5	1628283.0	1924219.5
250	964156.5	1149163.5	1366682.5	1621703.0	1923713.0
500	959218.5	1137726.5	1351861.5	1608096.5	1907763.5
750	960199.5	1142484.0	1351376.0	1600806.0	1902359.5
1000	958463.5	1138866.5	1349787.0	1593227.0	1884683.5
1250	960802.5	1136121.0	1348637.0	1583861.0	1874501.0
1500	954852.0	1124677.0	1330853.0	1573919.0	1853177.5
1750	958126.0	1127072.0	1329237.0	1569197.0	1842863.5
2000	953647.0	1122163.0	1316630.0	1547950.5	1827663.5
2250	954544.0	1122117.0	1322966.5	1551181.0	1825126.0
2500	957380.0	1118819.0	1315203.5	1541068.0	1801304.0
2750	952584.5	1113344.5	1305000.0	1533183.0	1796295.5
3000	952489.0	1109362.0	1293604.0	1514430.5	1775604.5
3250	951365.5	1111931.0	1293234.0	1505059.0	1762520.5
3500	951173.5	1108504.0	1282562.0	1493641.0	1736458.0
3750	945343.5	1093770.5	1273248.5	1472825.0	1709921.0
4000	942673.5	1095356.5	1271988.0	1480447.5	1714191.5
4250	944729.0	1092967.5	1274513.0	1475222.0	1713986.5
4500	944437.5	1087489.0	1264701.5	1473723.5	1696222.0
4750	941381.0	1087661.5	1262258.5	1456406.5	1676910.0
5000	938222.5	1086375.5	1246640.0	1440979.0	1664114.0

Table A2.22 KI1, Autumn, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5304	0.4918	0.4608	0.3568	0.2066	0.0902	0.0398	0.0150	0.0000
250	0.5270	0.4956	0.4588	0.3584	0.2086	0.0874	0.0366	0.0126	0.0000
500	0.5272	0.4930	0.4562	0.3560	0.2094	0.0934	0.0390	0.0138	0.0002
750	0.5308	0.4962	0.4638	0.3620	0.2078	0.0964	0.0398	0.0150	0.0000
1000	0.5406	0.5070	0.4704	0.3732	0.2164	0.0966	0.0410	0.0166	0.0000
1250	0.5372	0.5006	0.4606	0.3634	0.2126	0.0966	0.0412	0.0180	0.0000
1500	0.5512	0.5174	0.4810	0.3778	0.2192	0.1000	0.0454	0.0174	0.0002
1750	0.5512	0.5142	0.4824	0.3872	0.2306	0.1036	0.0490	0.0202	0.0000
2000	0.5506	0.5184	0.4804	0.3792	0.2214	0.0988	0.0454	0.0172	0.0002
2250	0.5442	0.5114	0.4740	0.3738	0.2302	0.1066	0.0498	0.0188	0.0002
2500	0.5532	0.5196	0.4854	0.3828	0.2222	0.0980	0.0422	0.0182	0.0000
2750	0.5592	0.5264	0.4930	0.3918	0.2342	0.1116	0.0510	0.0200	0.0002
3000	0.5544	0.5178	0.4854	0.3856	0.2340	0.1060	0.0478	0.0192	0.0000
3250	0.5542	0.5194	0.4864	0.3942	0.2362	0.1138	0.0496	0.0194	0.0002
3500	0.5662	0.5316	0.4960	0.3898	0.2452	0.1166	0.0506	0.0218	0.0000
3750	0.5838	0.5472	0.5100	0.4070	0.2550	0.1232	0.0590	0.0222	0.0002
4000	0.5834	0.5494	0.5118	0.4100	0.2456	0.1236	0.0588	0.0236	0.0000
4250	0.5726	0.5410	0.5092	0.4102	0.2478	0.1254	0.0566	0.0240	0.0002
4500	0.5740	0.5396	0.5070	0.4042	0.2458	0.1184	0.0518	0.0206	0.0000
4750	0.5838	0.5508	0.5178	0.4128	0.2592	0.1248	0.0572	0.0224	0.0000
5000	0.5830	0.5474	0.5184	0.4154	0.2604	0.1310	0.0638	0.0298	0.0002

Table A2.23 KI1, Autumn, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0034	0.0038	-0.0020	0.0016	0.0020	-0.0028	-0.0032	-0.0024	0.0000
500	-0.0032	0.0012	-0.0046	-0.0008	0.0028	0.0032	-0.0008	-0.0012	0.0002
750	0.0004	0.0044	0.0030	0.0052	0.0012	0.0062	0.0000	0.0000	0.0000
1000	0.0102	0.0152	0.0096	0.0164	0.0098	0.0064	0.0012	0.0016	0.0000
1250	0.0068	0.0088	-0.0002	0.0066	0.0060	0.0064	0.0014	0.0030	0.0000
1500	0.0208	0.0256	0.0202	0.0210	0.0126	0.0098	0.0056	0.0024	0.0002
1750	0.0208	0.0224	0.0216	0.0304	0.0240	0.0134	0.0092	0.0052	0.0000
2000	0.0202	0.0266	0.0196	0.0224	0.0148	0.0086	0.0056	0.0022	0.0002
2250	0.0138	0.0196	0.0132	0.0170	0.0236	0.0164	0.0100	0.0038	0.0002
2500	0.0228	0.0278	0.0246	0.0260	0.0156	0.0078	0.0024	0.0032	0.0000
2750	0.0288	0.0346	0.0322	0.0350	0.0276	0.0214	0.0112	0.0050	0.0002
3000	0.0240	0.0260	0.0246	0.0288	0.0274	0.0158	0.0080	0.0042	0.0000
3250	0.0238	0.0276	0.0256	0.0374	0.0296	0.0236	0.0098	0.0044	0.0002
3500	0.0358	0.0398	0.0352	0.0330	0.0386	0.0264	0.0108	0.0068	0.0000
3750	0.0534	0.0554	0.0492	0.0502	0.0484	0.0330	0.0192	0.0072	0.0002
4000	0.0530	0.0576	0.0510	0.0532	0.0390	0.0334	0.0190	0.0086	0.0000
4250	0.0422	0.0492	0.0484	0.0534	0.0412	0.0352	0.0168	0.0090	0.0002
4500	0.0436	0.0478	0.0462	0.0474	0.0392	0.0282	0.0120	0.0056	0.0000
4750	0.0534	0.0590	0.0570	0.0560	0.0526	0.0346	0.0174	0.0074	0.0000
5000	0.0526	0.0556	0.0576	0.0586	0.0538	0.0408	0.0240	0.0148	0.0002

Table A2.24 KI1, Autumn, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0030	0.0028	0.0028	0.0024	0.0016	0.0010	0.0004	0.0002	0
250	0.0048	0.0040	0.0036	0.0024	0.0008	0.0006	0.0006	0.0004	0
500	0.0044	0.0044	0.0034	0.0024	0.0024	0.0020	0.0014	0.0008	0
750	0.0044	0.0044	0.0044	0.0034	0.0024	0.0020	0.0010	0.0006	0
1000	0.0056	0.0056	0.0048	0.0032	0.0022	0.0010	0.0004	0.0000	0
1250	0.0036	0.0032	0.0030	0.0028	0.0018	0.0014	0.0008	0.0008	0
1500	0.0062	0.0056	0.0052	0.0040	0.0024	0.0014	0.0010	0.0002	0
1750	0.0034	0.0032	0.0030	0.0022	0.0010	0.0004	0.0004	0.0002	0
2000	0.0044	0.0042	0.0040	0.0032	0.0014	0.0008	0.0008	0.0004	0
2250	0.0054	0.0048	0.0048	0.0034	0.0022	0.0014	0.0006	0.0002	0
2500	0.0052	0.0044	0.0040	0.0026	0.0020	0.0010	0.0008	0.0002	0
2750	0.0052	0.0046	0.0042	0.0032	0.0014	0.0004	0.0002	0.0000	0
3000	0.0062	0.0056	0.0054	0.0034	0.0026	0.0016	0.0012	0.0008	0
3250	0.0054	0.0048	0.0046	0.0038	0.0022	0.0014	0.0008	0.0000	0
3500	0.0070	0.0070	0.0060	0.0048	0.0038	0.0018	0.0012	0.0004	0
3750	0.0086	0.0082	0.0080	0.0058	0.0034	0.0020	0.0010	0.0006	0
4000	0.0072	0.0070	0.0070	0.0054	0.0030	0.0010	0.0006	0.0002	0
4250	0.0088	0.0082	0.0080	0.0056	0.0036	0.0018	0.0008	0.0004	0
4500	0.0090	0.0084	0.0074	0.0060	0.0044	0.0022	0.0012	0.0006	0
4750	0.0108	0.0100	0.0098	0.0070	0.0042	0.0022	0.0006	0.0002	0
5000	0.0104	0.0102	0.0098	0.0072	0.0048	0.0030	0.0014	0.0002	0

Table A2.25 KI1, Autumn, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0018	0.0012	0.0008	0.0000	-0.0008	-0.0004	0.0002	0.0002	0
500	0.0014	0.0016	0.0006	0.0000	0.0008	0.0010	0.0010	0.0006	0
750	0.0014	0.0016	0.0016	0.0010	0.0008	0.0010	0.0006	0.0004	0
1000	0.0026	0.0028	0.0020	0.0008	0.0006	0.0000	0.0000	-0.0002	0
1250	0.0006	0.0004	0.0002	0.0004	0.0002	0.0004	0.0004	0.0006	0
1500	0.0032	0.0028	0.0024	0.0016	0.0008	0.0004	0.0006	0.0000	0
1750	0.0004	0.0004	0.0002	-0.0002	-0.0006	-0.0006	0.0000	0.0000	0
2000	0.0014	0.0014	0.0012	0.0008	-0.0002	-0.0002	0.0004	0.0002	0
2250	0.0024	0.0020	0.0020	0.0010	0.0006	0.0004	0.0002	0.0000	0
2500	0.0022	0.0016	0.0012	0.0002	0.0004	0.0000	0.0004	0.0000	0
2750	0.0022	0.0018	0.0014	0.0008	-0.0002	-0.0006	-0.0002	-0.0002	0
3000	0.0032	0.0028	0.0026	0.0010	0.0010	0.0006	0.0008	0.0006	0
3250	0.0024	0.0020	0.0018	0.0014	0.0006	0.0004	0.0004	-0.0002	0
3500	0.0040	0.0042	0.0032	0.0024	0.0022	0.0008	0.0008	0.0002	0
3750	0.0056	0.0054	0.0052	0.0034	0.0018	0.0010	0.0006	0.0004	0
4000	0.0042	0.0042	0.0042	0.0030	0.0014	0.0000	0.0002	0.0000	0
4250	0.0058	0.0054	0.0052	0.0032	0.0020	0.0008	0.0004	0.0002	0
4500	0.0060	0.0056	0.0046	0.0036	0.0028	0.0012	0.0008	0.0004	0
4750	0.0078	0.0072	0.0070	0.0046	0.0026	0.0012	0.0002	0.0000	0
5000	0.0074	0.0074	0.0070	0.0048	0.0032	0.0020	0.0010	0.0000	0

Table A2.26 KI1, Autumn, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4852	0.4710	0.4256	0.3544	0.2850	0.2190	0.1536	0.0114
250	0.5004	0.4846	0.4678	0.4236	0.3512	0.2818	0.2234	0.1584	0.0128
500	0.5098	0.4968	0.4822	0.4368	0.3600	0.2922	0.2226	0.1664	0.0120
750	0.5170	0.5016	0.4858	0.4438	0.3746	0.2940	0.2298	0.1728	0.0128
1000	0.5260	0.5132	0.5006	0.4592	0.3800	0.3044	0.2366	0.1774	0.0140
1250	0.5366	0.5242	0.5108	0.4612	0.3848	0.3134	0.2424	0.1824	0.0144
1500	0.5582	0.5414	0.5250	0.4786	0.4078	0.3334	0.2648	0.2004	0.0194
1750	0.5550	0.5414	0.5300	0.4906	0.4114	0.3382	0.2712	0.2044	0.0142
2000	0.5758	0.5622	0.5452	0.5002	0.4304	0.3496	0.2706	0.2048	0.0148
2250	0.5792	0.5610	0.5450	0.5024	0.4266	0.3484	0.2768	0.2024	0.0168
2500	0.5864	0.5720	0.5584	0.5196	0.4438	0.3716	0.2932	0.2202	0.0196
2750	0.5984	0.5854	0.5726	0.5290	0.4482	0.3748	0.2976	0.2250	0.0204
3000	0.6162	0.6034	0.5918	0.5420	0.4626	0.3906	0.3210	0.2456	0.0216
3250	0.6224	0.6104	0.5968	0.5518	0.4734	0.3924	0.3182	0.2482	0.0208
3500	0.6426	0.6282	0.6160	0.5712	0.4962	0.4196	0.3362	0.2638	0.0226
3750	0.6512	0.6406	0.6276	0.5896	0.5218	0.4340	0.3508	0.2670	0.0264
4000	0.6666	0.6530	0.6390	0.5926	0.5174	0.4324	0.3464	0.2694	0.0258
4250	0.6712	0.6544	0.6386	0.5934	0.5138	0.4386	0.3568	0.2824	0.0296
4500	0.6698	0.6576	0.6434	0.6026	0.5272	0.4470	0.3696	0.2864	0.0262
4750	0.6868	0.6744	0.6616	0.6252	0.5422	0.4622	0.3740	0.2938	0.0334
5000	0.6996	0.6896	0.6764	0.6334	0.5572	0.4746	0.3978	0.3126	0.0362

Table A2.27 KI1, Autumn, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0004	-0.0006	-0.0032	-0.0020	-0.0032	-0.0032	0.0044	0.0048	0.0014
500	0.0098	0.0116	0.0112	0.0112	0.0056	0.0072	0.0036	0.0128	0.0006
750	0.0170	0.0164	0.0148	0.0182	0.0202	0.0090	0.0108	0.0192	0.0014
1000	0.0260	0.0280	0.0296	0.0336	0.0256	0.0194	0.0176	0.0238	0.0026
1250	0.0366	0.0390	0.0398	0.0356	0.0304	0.0284	0.0234	0.0288	0.0030
1500	0.0582	0.0562	0.0540	0.0530	0.0534	0.0484	0.0458	0.0468	0.0080
1750	0.0550	0.0562	0.0590	0.0650	0.0570	0.0532	0.0522	0.0508	0.0028
2000	0.0758	0.0770	0.0742	0.0746	0.0760	0.0646	0.0516	0.0512	0.0034
2250	0.0792	0.0758	0.0740	0.0768	0.0722	0.0634	0.0578	0.0488	0.0054
2500	0.0864	0.0868	0.0874	0.0940	0.0894	0.0866	0.0742	0.0666	0.0082
2750	0.0984	0.1002	0.1016	0.1034	0.0938	0.0898	0.0786	0.0714	0.0090
3000	0.1162	0.1182	0.1208	0.1164	0.1082	0.1056	0.1020	0.0920	0.0102
3250	0.1224	0.1252	0.1258	0.1262	0.1190	0.1074	0.0992	0.0946	0.0094
3500	0.1426	0.1430	0.1450	0.1456	0.1418	0.1346	0.1172	0.1102	0.0112
3750	0.1512	0.1554	0.1566	0.1640	0.1674	0.1490	0.1318	0.1134	0.0150
4000	0.1666	0.1678	0.1680	0.1670	0.1630	0.1474	0.1274	0.1158	0.0144
4250	0.1712	0.1692	0.1676	0.1678	0.1594	0.1536	0.1378	0.1288	0.0182
4500	0.1698	0.1724	0.1724	0.1770	0.1728	0.1620	0.1506	0.1328	0.0148
4750	0.1868	0.1892	0.1906	0.1996	0.1878	0.1772	0.1550	0.1402	0.0220
5000	0.1996	0.2044	0.2054	0.2078	0.2028	0.1896	0.1788	0.1590	0.0248

Table A2.28 KI1, Autumn, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.002735526	0.9854343166	1.021829903
250	1.002631349	0.9851905179	1.021677020
500	1.002331985	0.9851155019	1.021747166
750	1.002209788	0.9848874688	1.021107695
1000	1.002212993	0.9849714652	1.020736960
1250	1.002228027	0.9850622890	1.021667722
1500	1.002204656	0.9850102856	1.021672576
1750	1.001993772	0.9839748949	1.020779212
2000	1.002123111	0.9831026020	1.020631136
2250	1.002178023	0.9843417934	1.021077094
2500	1.001601036	0.9839084402	1.021351983
2750	1.001803524	0.9844425450	1.021050122
3000	1.001801254	0.9836121191	1.020741411
3250	1.001448162	0.9837175510	1.020073324
3500	1.001493850	0.9841144502	1.020265840
3750	1.001502954	0.9841597102	1.020341210
4000	1.001528697	0.9838119451	1.020177273
4250	1.001173783	0.9835286024	1.020473485
4500	1.001227477	0.9837847223	1.019243251
4750	1.001398571	0.9835792328	1.020143761
5000	1.001211460	0.9834694149	1.020317099

Table A2.29 KI1, Autumn, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.0000000000000	0.00000000000000
250	-0.0001041765981	-0.0002437986473	-0.00015288389822
500	-0.0004035412010	-0.0003188146549	-0.00008273709435
750	-0.0005257375614	-0.0005468477370	-0.00072220887246
1000	-0.0005225329022	-0.0004628513346	-0.00109294332909
1250	-0.0005074983334	-0.0003720275251	-0.00016218112388
1500	-0.0005308693803	-0.0004240309982	-0.00015732737532
1750	-0.0007417541415	-0.0014594216380	-0.00105069110933
2000	-0.0006124144450	-0.0023317145381	-0.00119876769331
2250	-0.0005575026434	-0.0010925232101	-0.00075280955337
2500	-0.0011344895001	-0.0015258764075	-0.00047792064372
2750	-0.0009320018420	-0.0009917715634	-0.00077978120422
3000	-0.0009342713737	-0.0018221975043	-0.00108849217283
3250	-0.0012873637877	-0.0017167655611	-0.00175657962788
3500	-0.0012416758959	-0.0013198664139	-0.00156406342890
3750	-0.0012325720809	-0.0012746063747	-0.00148869303228
4000	-0.0012068292237	-0.0016223714982	-0.00165263048337
4250	-0.0015617423480	-0.0019057141926	-0.00135641879521
4500	-0.0015080489510	-0.0016495942843	-0.00258665250744
4750	-0.0013369544410	-0.0018550837260	-0.00168614225862
5000	-0.0015240656931	-0.0019649017219	-0.00151280460124

Table A2.30 KI1, Autumn, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	830938.5	857122.0	869729.0	878123.5	882104.0
250	832453.5	854527.0	866221.0	874808.0	880014.5
500	830199.0	856264.0	867106.5	873040.0	875158.5
750	827924.0	850824.0	863725.5	866178.0	870594.5
1000	828202.5	850359.0	862741.5	865623.5	872120.5
1250	827542.0	849071.0	859698.5	866399.0	867852.5
1500	830950.5	848152.0	859253.0	865905.0	867842.5
1750	827163.5	844578.5	852801.5	861867.0	863020.0
2000	827407.5	844026.5	852931.5	859105.5	865638.0
2250	822942.0	839959.0	851351.5	860511.5	864281.5
2500	825308.0	839842.5	851372.5	853696.0	858326.5
2750	822257.0	839244.0	849127.0	854976.5	858302.0
3000	821687.0	837773.0	845925.0	849554.5	855891.0
3250	824169.0	838356.5	843082.0	851228.0	850978.0
3500	821659.0	841367.0	844582.5	846429.0	849638.5
3750	819670.5	834622.5	841746.0	844092.0	848460.0
4000	818749.5	831919.5	837917.5	842483.5	846551.0
4250	820150.5	829040.5	837963.0	842104.5	843519.5
4500	820008.0	832242.0	838390.5	841996.5	842779.0
4750	815775.0	825543.0	830966.0	835946.5	841286.0
5000	818582.5	830711.5	836196.5	839258.5	836745.5

Table A2.31 KI1, Autumn, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9724	0.9630	0.9512	0.8822	0.6550	0.3556	0.1306	0.0304	0
250	0.9748	0.9656	0.9546	0.8860	0.6700	0.3680	0.1328	0.0282	0
500	0.9776	0.9694	0.9572	0.8960	0.6776	0.3766	0.1390	0.0344	0
750	0.9732	0.9642	0.9536	0.9034	0.6942	0.3970	0.1584	0.0416	0
1000	0.9772	0.9702	0.9594	0.9058	0.6976	0.3992	0.1632	0.0412	0
1250	0.9786	0.9700	0.9598	0.9036	0.6964	0.3948	0.1560	0.0400	0
1500	0.9804	0.9722	0.9616	0.9076	0.7148	0.4052	0.1618	0.0418	0
1750	0.9826	0.9744	0.9636	0.9152	0.7230	0.4332	0.1676	0.0460	0
2000	0.9802	0.9724	0.9638	0.9196	0.7214	0.4268	0.1786	0.0448	0
2250	0.9834	0.9760	0.9662	0.9234	0.7378	0.4430	0.1804	0.0532	0
2500	0.9850	0.9802	0.9708	0.9252	0.7364	0.4464	0.1858	0.0500	0
2750	0.9796	0.9720	0.9630	0.9136	0.7352	0.4478	0.1962	0.0538	0
3000	0.9870	0.9820	0.9728	0.9332	0.7496	0.4684	0.1996	0.0546	0
3250	0.9826	0.9760	0.9660	0.9198	0.7542	0.4760	0.2094	0.0574	0
3500	0.9862	0.9810	0.9738	0.9350	0.7644	0.4836	0.2160	0.0572	0
3750	0.9856	0.9792	0.9726	0.9328	0.7734	0.4850	0.2166	0.0596	0
4000	0.9886	0.9838	0.9768	0.9348	0.7710	0.4950	0.2284	0.0614	0
4250	0.9906	0.9876	0.9794	0.9424	0.7876	0.5138	0.2378	0.0712	0
4500	0.9866	0.9822	0.9764	0.9374	0.7880	0.5084	0.2334	0.0672	0
4750	0.9906	0.9858	0.9792	0.9464	0.8006	0.5284	0.2474	0.0754	0
5000	0.9896	0.9852	0.9798	0.9462	0.7934	0.5268	0.2408	0.0704	0

Table A2.32 KI1, Autumn, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0024	0.0026	0.0034	0.0038	0.0150	0.0124	0.0022	-0.0022	0
500	0.0052	0.0064	0.0060	0.0138	0.0226	0.0210	0.0084	0.0040	0
750	0.0008	0.0012	0.0024	0.0212	0.0392	0.0414	0.0278	0.0112	0
1000	0.0048	0.0072	0.0082	0.0236	0.0426	0.0436	0.0326	0.0108	0
1250	0.0062	0.0070	0.0086	0.0214	0.0414	0.0392	0.0254	0.0096	0
1500	0.0080	0.0092	0.0104	0.0254	0.0598	0.0496	0.0312	0.0114	0
1750	0.0102	0.0114	0.0124	0.0330	0.0680	0.0776	0.0370	0.0156	0
2000	0.0078	0.0094	0.0126	0.0374	0.0664	0.0712	0.0480	0.0144	0
2250	0.0110	0.0130	0.0150	0.0412	0.0828	0.0874	0.0498	0.0228	0
2500	0.0126	0.0172	0.0196	0.0430	0.0814	0.0908	0.0552	0.0196	0
2750	0.0072	0.0090	0.0118	0.0314	0.0802	0.0922	0.0656	0.0234	0
3000	0.0146	0.0190	0.0216	0.0510	0.0946	0.1128	0.0690	0.0242	0
3250	0.0102	0.0130	0.0148	0.0376	0.0992	0.1204	0.0788	0.0270	0
3500	0.0138	0.0180	0.0226	0.0528	0.1094	0.1280	0.0854	0.0268	0
3750	0.0132	0.0162	0.0214	0.0506	0.1184	0.1294	0.0860	0.0292	0
4000	0.0162	0.0208	0.0256	0.0526	0.1160	0.1394	0.0978	0.0310	0
4250	0.0182	0.0246	0.0282	0.0602	0.1326	0.1582	0.1072	0.0408	0
4500	0.0142	0.0192	0.0252	0.0552	0.1330	0.1528	0.1028	0.0368	0
4750	0.0182	0.0228	0.0280	0.0642	0.1456	0.1728	0.1168	0.0450	0
5000	0.0172	0.0222	0.0286	0.0640	0.1384	0.1712	0.1102	0.0400	0

Table A2.33 KI1, Autumn, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.3416	0.3092	0.2826	0.2040	0.0990	0.0398	0.0100	0.0016	0
250	0.3356	0.3054	0.2796	0.2092	0.1060	0.0424	0.0120	0.0016	0
500	0.3446	0.3184	0.2952	0.2208	0.1134	0.0462	0.0144	0.0036	0
750	0.3684	0.3408	0.3110	0.2286	0.1188	0.0494	0.0142	0.0030	0
1000	0.3560	0.3280	0.2990	0.2248	0.1196	0.0490	0.0158	0.0038	0
1250	0.3680	0.3422	0.3190	0.2376	0.1228	0.0508	0.0150	0.0040	0
1500	0.3720	0.3482	0.3236	0.2424	0.1276	0.0488	0.0150	0.0026	0
1750	0.3914	0.3616	0.3300	0.2434	0.1326	0.0594	0.0196	0.0050	0
2000	0.3806	0.3528	0.3282	0.2430	0.1330	0.0584	0.0210	0.0056	0
2250	0.3870	0.3638	0.3358	0.2544	0.1412	0.0620	0.0196	0.0056	0
2500	0.4070	0.3802	0.3512	0.2674	0.1448	0.0648	0.0240	0.0056	0
2750	0.4058	0.3810	0.3526	0.2642	0.1478	0.0680	0.0248	0.0054	0
3000	0.4118	0.3852	0.3566	0.2766	0.1546	0.0712	0.0236	0.0066	0
3250	0.4260	0.4004	0.3698	0.2864	0.1588	0.0744	0.0268	0.0052	0
3500	0.4304	0.4058	0.3772	0.2888	0.1678	0.0828	0.0296	0.0082	0
3750	0.4392	0.4126	0.3820	0.2940	0.1678	0.0778	0.0222	0.0056	0
4000	0.4424	0.4104	0.3812	0.2986	0.1756	0.0824	0.0312	0.0092	0
4250	0.4554	0.4280	0.3976	0.3106	0.1882	0.0902	0.0310	0.0074	0
4500	0.4504	0.4240	0.3942	0.3068	0.1772	0.0896	0.0318	0.0072	0
4750	0.4598	0.4316	0.4010	0.3058	0.1834	0.0874	0.0320	0.0088	0
5000	0.4728	0.4406	0.4128	0.3250	0.1964	0.0946	0.0358	0.0086	0

Table A2.34 KI1, Autumn, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	-0.0060	-0.0038	-0.0030	0.0052	0.0070	0.0026	0.0020	0.0000	0
500	0.0030	0.0092	0.0126	0.0168	0.0144	0.0064	0.0044	0.0020	0
750	0.0268	0.0316	0.0284	0.0246	0.0198	0.0096	0.0042	0.0014	0
1000	0.0144	0.0188	0.0164	0.0208	0.0206	0.0092	0.0058	0.0022	0
1250	0.0264	0.0330	0.0364	0.0336	0.0238	0.0110	0.0050	0.0024	0
1500	0.0304	0.0390	0.0410	0.0384	0.0286	0.0090	0.0050	0.0010	0
1750	0.0498	0.0524	0.0474	0.0394	0.0336	0.0196	0.0096	0.0034	0
2000	0.0390	0.0436	0.0456	0.0390	0.0340	0.0186	0.0110	0.0040	0
2250	0.0454	0.0546	0.0532	0.0504	0.0422	0.0222	0.0096	0.0040	0
2500	0.0654	0.0710	0.0686	0.0634	0.0458	0.0250	0.0140	0.0040	0
2750	0.0642	0.0718	0.0700	0.0602	0.0488	0.0282	0.0148	0.0038	0
3000	0.0702	0.0760	0.0740	0.0726	0.0556	0.0314	0.0136	0.0050	0
3250	0.0844	0.0912	0.0872	0.0824	0.0598	0.0346	0.0168	0.0036	0
3500	0.0888	0.0966	0.0946	0.0848	0.0688	0.0430	0.0196	0.0066	0
3750	0.0976	0.1034	0.0994	0.0900	0.0688	0.0380	0.0122	0.0040	0
4000	0.1008	0.1012	0.0986	0.0946	0.0766	0.0426	0.0212	0.0076	0
4250	0.1138	0.1188	0.1150	0.1066	0.0892	0.0504	0.0210	0.0058	0
4500	0.1088	0.1148	0.1116	0.1028	0.0782	0.0498	0.0218	0.0056	0
4750	0.1182	0.1224	0.1184	0.1018	0.0844	0.0476	0.0220	0.0072	0
5000	0.1312	0.1314	0.1302	0.1210	0.0974	0.0548	0.0258	0.0070	0

Table A2.35 KI1, Autumn, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4706	0.4440	0.3652	0.2184	0.1064	0.0398	0.0092	0
250	0.5060	0.4782	0.4470	0.3630	0.2232	0.1118	0.0432	0.0104	0
500	0.5218	0.4938	0.4640	0.3746	0.2328	0.1200	0.0462	0.0132	0
750	0.5354	0.5106	0.4782	0.3924	0.2464	0.1278	0.0494	0.0128	0
1000	0.5344	0.5044	0.4730	0.3864	0.2422	0.1254	0.0490	0.0144	0
1250	0.5410	0.5140	0.4874	0.3964	0.2530	0.1294	0.0512	0.0136	0
1500	0.5450	0.5186	0.4888	0.4032	0.2606	0.1342	0.0488	0.0136	0
1750	0.5662	0.5364	0.5054	0.4214	0.2620	0.1394	0.0596	0.0188	0
2000	0.5560	0.5292	0.4978	0.4112	0.2638	0.1382	0.0586	0.0188	0
2250	0.5598	0.5332	0.5004	0.4160	0.2698	0.1488	0.0624	0.0182	0
2500	0.5702	0.5452	0.5200	0.4370	0.2818	0.1514	0.0648	0.0224	0
2750	0.5790	0.5498	0.5198	0.4318	0.2840	0.1536	0.0684	0.0234	0
3000	0.5880	0.5626	0.5292	0.4400	0.2942	0.1630	0.0714	0.0220	0
3250	0.6036	0.5716	0.5448	0.4544	0.3078	0.1672	0.0746	0.0252	0
3500	0.6088	0.5806	0.5520	0.4584	0.3094	0.1772	0.0830	0.0276	0
3750	0.6136	0.5868	0.5554	0.4682	0.3098	0.1754	0.0778	0.0206	0
4000	0.6116	0.5894	0.5614	0.4724	0.3184	0.1820	0.0830	0.0298	0
4250	0.6204	0.5934	0.5684	0.4810	0.3310	0.1938	0.0904	0.0280	0
4500	0.6222	0.5968	0.5698	0.4828	0.3262	0.1824	0.0906	0.0290	0
4750	0.6282	0.6006	0.5764	0.4884	0.3274	0.1906	0.0878	0.0308	0
5000	0.6356	0.6052	0.5806	0.5036	0.3448	0.2034	0.0950	0.0334	0

Table A2.36 KI1, Autumn, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0060	0.0076	0.0030	-0.0022	0.0048	0.0054	0.0034	0.0012	0
500	0.0218	0.0232	0.0200	0.0094	0.0144	0.0136	0.0064	0.0040	0
750	0.0354	0.0400	0.0342	0.0272	0.0280	0.0214	0.0096	0.0036	0
1000	0.0344	0.0338	0.0290	0.0212	0.0238	0.0190	0.0092	0.0052	0
1250	0.0410	0.0434	0.0434	0.0312	0.0346	0.0230	0.0114	0.0044	0
1500	0.0450	0.0480	0.0448	0.0380	0.0422	0.0278	0.0090	0.0044	0
1750	0.0662	0.0658	0.0614	0.0562	0.0436	0.0330	0.0198	0.0096	0
2000	0.0560	0.0586	0.0538	0.0460	0.0454	0.0318	0.0188	0.0096	0
2250	0.0598	0.0626	0.0564	0.0508	0.0514	0.0424	0.0226	0.0090	0
2500	0.0702	0.0746	0.0760	0.0718	0.0634	0.0450	0.0250	0.0132	0
2750	0.0790	0.0792	0.0758	0.0666	0.0656	0.0472	0.0286	0.0142	0
3000	0.0880	0.0920	0.0852	0.0748	0.0758	0.0566	0.0316	0.0128	0
3250	0.1036	0.1010	0.1008	0.0892	0.0894	0.0608	0.0348	0.0160	0
3500	0.1088	0.1100	0.1080	0.0932	0.0910	0.0708	0.0432	0.0184	0
3750	0.1136	0.1162	0.1114	0.1030	0.0914	0.0690	0.0380	0.0114	0
4000	0.1116	0.1188	0.1174	0.1072	0.1000	0.0756	0.0432	0.0206	0
4250	0.1204	0.1228	0.1244	0.1158	0.1126	0.0874	0.0506	0.0188	0
4500	0.1222	0.1262	0.1258	0.1176	0.1078	0.0760	0.0508	0.0198	0
4750	0.1282	0.1300	0.1324	0.1232	0.1090	0.0842	0.0480	0.0216	0
5000	0.1356	0.1346	0.1366	0.1384	0.1264	0.0970	0.0552	0.0242	0

Table A2.37 KI1, Spring, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.035889173	1.008135210	1.060718047
250	1.035717806	1.008470921	1.060783725
500	1.035234433	1.007091820	1.060253945
750	1.034910774	1.007265733	1.058899933
1000	1.034203745	1.006673839	1.059117752
1250	1.033685604	1.006565099	1.058626090
1500	1.033586313	1.005269230	1.058529799
1750	1.033467238	1.005420432	1.057568760
2000	1.032596377	1.003736887	1.058144086
2250	1.032652191	1.004501475	1.056983135
2500	1.032108914	1.004116892	1.057105707
2750	1.031777329	1.003125107	1.055802207
3000	1.031264732	1.003653326	1.055141456
3250	1.030720854	1.002683611	1.056017469
3500	1.029988858	1.003029380	1.055862081
3750	1.029724205	1.000909037	1.055212621
4000	1.029438570	1.001942788	1.054766966
4250	1.029172172	1.000830666	1.054059162
4500	1.028821419	1.001069944	1.052655842
4750	1.028578515	1.000195690	1.052667835
5000	1.027606808	1.000104472	1.051839061

Table A2.38 KI1, Spring, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.0000000000000	0.00000000000000
250	-0.0001713670091	0.0003357111118	0.00006567734188
500	-0.0006547404924	-0.0010433903393	-0.00046410256374
750	-0.0009783992989	-0.0008694773537	-0.00181811401568
1000	-0.0016854277648	-0.0014613705634	-0.00160029562738
1250	-0.0022035690198	-0.0015701105149	-0.00209195739361
1500	-0.0023028601766	-0.0028659804310	-0.00218824808717
1750	-0.0024219354800	-0.0027147781041	-0.00314928767043
2000	-0.0032927962483	-0.0043983226553	-0.00257396124473
2250	-0.0032369823575	-0.0036337354721	-0.00373491222571
2500	-0.0037802595993	-0.0040183182986	-0.00361234025881
2750	-0.0041118440176	-0.0050101025471	-0.00491583986075
3000	-0.0046244415731	-0.0044818838087	-0.00557659168585
3250	-0.0051683190950	-0.0054515985154	-0.00470057835211
3500	-0.0059003147606	-0.0051058297687	-0.00485596675714
3750	-0.0061649679133	-0.0072261726425	-0.00550542610142
4000	-0.0064506029982	-0.0061924221428	-0.00595108150636
4250	-0.0067170008649	-0.0073045436022	-0.00665888555563
4500	-0.0070677539709	-0.0070652655835	-0.00806220551946
4750	-0.0073106586835	-0.0079395195498	-0.00805021272442
5000	-0.0082823652275	-0.0080307378969	-0.00887898660600

Table A2.39 KI1, Spring, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	726983.0	866880.0	1035205.5	1223970.0	1455800.5
250	725753.0	861965.0	1022497.0	1216956.0	1454992.0
500	726927.5	862843.5	1024015.0	1211811.0	1432368.5
750	726371.0	861163.0	1014946.5	1196466.0	1428421.0
1000	727585.5	853814.5	1013403.5	1188725.5	1408834.0
1250	722066.0	850345.0	994222.0	1169821.0	1380230.5
1500	724463.0	850321.5	998512.5	1177959.5	1386255.0
1750	720850.0	844360.5	995921.0	1167780.0	1373600.0
2000	720112.5	842176.5	986405.0	1155199.5	1352412.5
2250	717455.0	839617.5	987222.5	1151854.5	1344735.0
2500	717360.0	836092.5	972528.5	1139874.5	1332532.5
2750	714856.0	830074.5	966036.0	1127183.5	1319987.5
3000	716979.5	830786.5	962284.5	1120617.5	1309465.0
3250	712650.5	826163.5	960856.0	1108148.0	1291467.5
3500	715180.5	827458.5	957575.0	1107180.5	1279065.5
3750	714814.0	822099.5	952975.5	1096991.5	1269525.0
4000	709209.0	818077.0	939786.0	1087887.5	1254949.0
4250	710297.5	817273.0	939510.0	1087640.0	1246019.5
4500	706741.5	812571.5	934256.0	1076584.0	1233263.5
4750	707726.5	810877.5	927607.0	1068586.5	1226773.5
5000	707478.0	802454.5	921415.0	1052321.0	1198421.0

Table A2.40 KI1, Spring, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5334	0.5008	0.4660	0.3624	0.2136	0.0894	0.0380	0.0140	0.0000
250	0.5378	0.5004	0.4686	0.3690	0.2188	0.0974	0.0400	0.0150	0.0000
500	0.5342	0.4996	0.4640	0.3642	0.2138	0.0888	0.0330	0.0106	0.0000
750	0.5338	0.5004	0.4652	0.3682	0.2146	0.0944	0.0412	0.0132	0.0000
1000	0.5374	0.5076	0.4772	0.3764	0.2146	0.0958	0.0390	0.0136	0.0000
1250	0.5442	0.5124	0.4808	0.3784	0.2168	0.1012	0.0418	0.0184	0.0000
1500	0.5410	0.5044	0.4674	0.3666	0.2226	0.1024	0.0452	0.0178	0.0000
1750	0.5468	0.5200	0.4882	0.3784	0.2244	0.1026	0.0430	0.0166	0.0000
2000	0.5638	0.5326	0.4960	0.4012	0.2376	0.1108	0.0452	0.0194	0.0000
2250	0.5644	0.5306	0.4974	0.3958	0.2352	0.1126	0.0506	0.0208	0.0000
2500	0.5646	0.5292	0.4986	0.3996	0.2456	0.1186	0.0508	0.0218	0.0000
2750	0.5746	0.5418	0.5076	0.4078	0.2430	0.1188	0.0562	0.0236	0.0000
3000	0.5766	0.5456	0.5114	0.4110	0.2546	0.1138	0.0506	0.0200	0.0002
3250	0.5754	0.5396	0.5082	0.4118	0.2542	0.1232	0.0582	0.0218	0.0000
3500	0.5774	0.5432	0.5116	0.4074	0.2470	0.1266	0.0570	0.0232	0.0000
3750	0.5756	0.5402	0.5102	0.4172	0.2526	0.1168	0.0542	0.0230	0.0000
4000	0.5898	0.5552	0.5222	0.4200	0.2630	0.1242	0.0608	0.0262	0.0000
4250	0.5834	0.5534	0.5222	0.4268	0.2650	0.1244	0.0624	0.0276	0.0000
4500	0.6002	0.5694	0.5364	0.4328	0.2666	0.1324	0.0604	0.0262	0.0000
4750	0.6006	0.5652	0.5328	0.4392	0.2756	0.1414	0.0680	0.0264	0.0002
5000	0.6118	0.5788	0.5466	0.4462	0.2786	0.1410	0.0668	0.0314	0.0004

Table A2.41 KI1, Spring, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0044	-0.0004	0.0026	0.0066	0.0052	0.0080	0.0020	0.0010	0.0000
500	0.0008	-0.0012	-0.0020	0.0018	0.0002	-0.0006	-0.0050	-0.0034	0.0000
750	0.0004	-0.0004	-0.0008	0.0058	0.0010	0.0050	0.0032	-0.0008	0.0000
1000	0.0040	0.0068	0.0112	0.0140	0.0010	0.0064	0.0010	-0.0004	0.0000
1250	0.0108	0.0116	0.0148	0.0160	0.0032	0.0118	0.0038	0.0044	0.0000
1500	0.0076	0.0036	0.0014	0.0042	0.0090	0.0130	0.0072	0.0038	0.0000
1750	0.0134	0.0192	0.0222	0.0160	0.0108	0.0132	0.0050	0.0026	0.0000
2000	0.0304	0.0318	0.0300	0.0388	0.0240	0.0214	0.0072	0.0054	0.0000
2250	0.0310	0.0298	0.0314	0.0334	0.0216	0.0232	0.0126	0.0068	0.0000
2500	0.0312	0.0284	0.0326	0.0372	0.0320	0.0292	0.0128	0.0078	0.0000
2750	0.0412	0.0410	0.0416	0.0454	0.0294	0.0294	0.0182	0.0096	0.0000
3000	0.0432	0.0448	0.0454	0.0486	0.0410	0.0244	0.0126	0.0060	0.0002
3250	0.0420	0.0388	0.0422	0.0494	0.0406	0.0338	0.0202	0.0078	0.0000
3500	0.0440	0.0424	0.0456	0.0450	0.0334	0.0372	0.0190	0.0092	0.0000
3750	0.0422	0.0394	0.0442	0.0548	0.0390	0.0274	0.0162	0.0090	0.0000
4000	0.0564	0.0544	0.0562	0.0576	0.0494	0.0348	0.0228	0.0122	0.0000
4250	0.0500	0.0526	0.0562	0.0644	0.0514	0.0350	0.0244	0.0136	0.0000
4500	0.0668	0.0686	0.0704	0.0704	0.0530	0.0430	0.0224	0.0122	0.0000
4750	0.0672	0.0644	0.0668	0.0768	0.0620	0.0520	0.0300	0.0124	0.0002
5000	0.0784	0.0780	0.0806	0.0838	0.0650	0.0516	0.0288	0.0174	0.0004

Table A2.42 KI1, Spring, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0026	0.0020	0.0016	0.0010	0.0006	0.0000	0.0000	0.0000	0
250	0.0030	0.0026	0.0026	0.0012	0.0010	0.0004	0.0004	0.0002	0
500	0.0034	0.0030	0.0028	0.0024	0.0016	0.0010	0.0004	0.0002	0
750	0.0052	0.0046	0.0042	0.0024	0.0008	0.0006	0.0004	0.0004	0
1000	0.0040	0.0036	0.0032	0.0030	0.0010	0.0006	0.0006	0.0002	0
1250	0.0048	0.0042	0.0042	0.0036	0.0028	0.0012	0.0006	0.0004	0
1500	0.0064	0.0058	0.0056	0.0042	0.0028	0.0016	0.0010	0.0006	0
1750	0.0056	0.0048	0.0046	0.0036	0.0018	0.0008	0.0004	0.0002	0
2000	0.0054	0.0054	0.0048	0.0042	0.0018	0.0008	0.0006	0.0002	0
2250	0.0060	0.0058	0.0056	0.0048	0.0028	0.0016	0.0010	0.0004	0
2500	0.0074	0.0072	0.0062	0.0046	0.0028	0.0014	0.0008	0.0006	0
2750	0.0096	0.0080	0.0068	0.0056	0.0040	0.0030	0.0018	0.0010	0
3000	0.0072	0.0068	0.0058	0.0044	0.0034	0.0020	0.0010	0.0008	0
3250	0.0074	0.0070	0.0052	0.0042	0.0024	0.0012	0.0004	0.0000	0
3500	0.0104	0.0092	0.0084	0.0064	0.0040	0.0024	0.0016	0.0010	0
3750	0.0122	0.0116	0.0104	0.0080	0.0048	0.0016	0.0008	0.0008	0
4000	0.0102	0.0096	0.0088	0.0056	0.0030	0.0020	0.0014	0.0012	0
4250	0.0138	0.0120	0.0110	0.0084	0.0056	0.0026	0.0014	0.0008	0
4500	0.0098	0.0094	0.0086	0.0066	0.0040	0.0026	0.0014	0.0008	0
4750	0.0154	0.0138	0.0124	0.0106	0.0066	0.0040	0.0028	0.0018	0
5000	0.0162	0.0156	0.0146	0.0114	0.0074	0.0040	0.0022	0.0014	0

Table A2.43 KI1, Spring, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0004	0.0006	0.0010	0.0002	0.0004	0.0004	0.0004	0.0002	0
500	0.0008	0.0010	0.0012	0.0014	0.0010	0.0010	0.0004	0.0002	0
750	0.0026	0.0026	0.0026	0.0014	0.0002	0.0006	0.0004	0.0004	0
1000	0.0014	0.0016	0.0016	0.0020	0.0004	0.0006	0.0006	0.0002	0
1250	0.0022	0.0022	0.0026	0.0026	0.0022	0.0012	0.0006	0.0004	0
1500	0.0038	0.0038	0.0040	0.0032	0.0022	0.0016	0.0010	0.0006	0
1750	0.0030	0.0028	0.0030	0.0026	0.0012	0.0008	0.0004	0.0002	0
2000	0.0028	0.0034	0.0032	0.0032	0.0012	0.0008	0.0006	0.0002	0
2250	0.0034	0.0038	0.0040	0.0038	0.0022	0.0016	0.0010	0.0004	0
2500	0.0048	0.0052	0.0046	0.0036	0.0022	0.0014	0.0008	0.0006	0
2750	0.0070	0.0060	0.0052	0.0046	0.0034	0.0030	0.0018	0.0010	0
3000	0.0046	0.0048	0.0042	0.0034	0.0028	0.0020	0.0010	0.0008	0
3250	0.0048	0.0050	0.0036	0.0032	0.0018	0.0012	0.0004	0.0000	0
3500	0.0078	0.0072	0.0068	0.0054	0.0034	0.0024	0.0016	0.0010	0
3750	0.0096	0.0096	0.0088	0.0070	0.0042	0.0016	0.0008	0.0008	0
4000	0.0076	0.0076	0.0072	0.0046	0.0024	0.0020	0.0014	0.0012	0
4250	0.0112	0.0100	0.0094	0.0074	0.0050	0.0026	0.0014	0.0008	0
4500	0.0072	0.0074	0.0070	0.0056	0.0034	0.0026	0.0014	0.0008	0
4750	0.0128	0.0118	0.0108	0.0096	0.0060	0.0040	0.0028	0.0018	0
5000	0.0136	0.0136	0.0130	0.0104	0.0068	0.0040	0.0022	0.0014	0

Table A2.44 KI1, Spring, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4854	0.4726	0.4290	0.3582	0.2826	0.2144	0.1552	0.0122
250	0.5010	0.4860	0.4704	0.4294	0.3618	0.2952	0.2344	0.1732	0.0116
500	0.5230	0.5086	0.4942	0.4518	0.3748	0.3002	0.2290	0.1650	0.0094
750	0.5264	0.5106	0.4980	0.4530	0.3796	0.3106	0.2442	0.1838	0.0162
1000	0.5454	0.5316	0.5162	0.4718	0.3988	0.3218	0.2452	0.1852	0.0136
1250	0.5710	0.5570	0.5442	0.5028	0.4230	0.3410	0.2686	0.2050	0.0180
1500	0.5726	0.5560	0.5388	0.4958	0.4192	0.3488	0.2714	0.2034	0.0176
1750	0.5782	0.5662	0.5520	0.5098	0.4360	0.3568	0.2798	0.2098	0.0162
2000	0.6028	0.5890	0.5750	0.5340	0.4534	0.3782	0.2994	0.2328	0.0214
2250	0.6082	0.5966	0.5816	0.5364	0.4644	0.3798	0.3042	0.2314	0.0212
2500	0.6260	0.6130	0.5994	0.5538	0.4778	0.3940	0.3142	0.2416	0.0210
2750	0.6358	0.6246	0.6108	0.5734	0.4896	0.4078	0.3372	0.2576	0.0264
3000	0.6540	0.6400	0.6274	0.5810	0.5010	0.4188	0.3422	0.2640	0.0246
3250	0.6692	0.6566	0.6450	0.6032	0.5208	0.4412	0.3610	0.2770	0.0250
3500	0.6844	0.6718	0.6566	0.6120	0.5342	0.4486	0.3682	0.2880	0.0270
3750	0.6816	0.6668	0.6538	0.6146	0.5460	0.4646	0.3848	0.3108	0.0320
4000	0.7144	0.6992	0.6850	0.6454	0.5618	0.4808	0.3964	0.3142	0.0366
4250	0.7088	0.6942	0.6838	0.6462	0.5698	0.4876	0.4036	0.3230	0.0382
4500	0.7176	0.7032	0.6914	0.6530	0.5792	0.5042	0.4224	0.3368	0.0364
4750	0.7386	0.7234	0.7116	0.6660	0.5908	0.5142	0.4300	0.3476	0.0414
5000	0.7522	0.7412	0.7304	0.6900	0.6214	0.5460	0.4600	0.3738	0.0478

Table A2.45 KI1, Spring, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0010	0.0006	-0.0022	0.0004	0.0036	0.0126	0.0200	0.0180	-0.0006
500	0.0230	0.0232	0.0216	0.0228	0.0166	0.0176	0.0146	0.0098	-0.0028
750	0.0264	0.0252	0.0254	0.0240	0.0214	0.0280	0.0298	0.0286	0.0040
1000	0.0454	0.0462	0.0436	0.0428	0.0406	0.0392	0.0308	0.0300	0.0014
1250	0.0710	0.0716	0.0716	0.0738	0.0648	0.0584	0.0542	0.0498	0.0058
1500	0.0726	0.0706	0.0662	0.0668	0.0610	0.0662	0.0570	0.0482	0.0054
1750	0.0782	0.0808	0.0794	0.0808	0.0778	0.0742	0.0654	0.0546	0.0040
2000	0.1028	0.1036	0.1024	0.1050	0.0952	0.0956	0.0850	0.0776	0.0092
2250	0.1082	0.1112	0.1090	0.1074	0.1062	0.0972	0.0898	0.0762	0.0090
2500	0.1260	0.1276	0.1268	0.1248	0.1196	0.1114	0.0998	0.0864	0.0088
2750	0.1358	0.1392	0.1382	0.1444	0.1314	0.1252	0.1228	0.1024	0.0142
3000	0.1540	0.1546	0.1548	0.1520	0.1428	0.1362	0.1278	0.1088	0.0124
3250	0.1692	0.1712	0.1724	0.1742	0.1626	0.1586	0.1466	0.1218	0.0128
3500	0.1844	0.1864	0.1840	0.1830	0.1760	0.1660	0.1538	0.1328	0.0148
3750	0.1816	0.1814	0.1812	0.1856	0.1878	0.1820	0.1704	0.1556	0.0198
4000	0.2144	0.2138	0.2124	0.2164	0.2036	0.1982	0.1820	0.1590	0.0244
4250	0.2088	0.2088	0.2112	0.2172	0.2116	0.2050	0.1892	0.1678	0.0260
4500	0.2176	0.2178	0.2188	0.2240	0.2210	0.2216	0.2080	0.1816	0.0242
4750	0.2386	0.2380	0.2390	0.2370	0.2326	0.2316	0.2156	0.1924	0.0292
5000	0.2522	0.2558	0.2578	0.2610	0.2632	0.2634	0.2456	0.2186	0.0356

Table A2.46 KI1, Spring, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.002542587	0.9849481691	1.021638758
250	1.002717361	0.9852561571	1.021137535
500	1.002272585	0.9845904092	1.021854453
750	1.002206840	0.9845344528	1.021012516
1000	1.002185518	0.9848667488	1.021217971
1250	1.002068914	0.9844460777	1.021081641
1500	1.002181739	0.9852930544	1.020670641
1750	1.001988663	0.9836088742	1.021571711
2000	1.002019163	0.9840473478	1.021467316
2250	1.001799912	0.9846373036	1.020829902
2500	1.001421118	0.9840469986	1.020381011
2750	1.001503771	0.9841643855	1.020075721
3000	1.001420401	0.9836467265	1.020064095
3250	1.001453378	0.9842887738	1.019880382
3500	1.001149750	0.9835442970	1.019776118
3750	1.000768095	0.9836117088	1.019291472
4000	1.000865042	0.9837861032	1.018999228
4250	1.001224040	0.9832272250	1.019142925
4500	1.000907432	0.9830321601	1.020213244
4750	1.000627941	0.9828476513	1.019189245
5000	1.000428694	0.9830286313	1.019041556

Table A2.47 KI1, Spring, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.0000000000000	0.00000000000000
250	0.0001747740638	0.0003079880650	-0.00050122260461
500	-0.0002700017075	-0.0003577599162	0.00021569498634
750	-0.0003357476096	-0.0004137162862	-0.00062624125408
1000	-0.0003570693398	-0.0000814202319	-0.00042078708157
1250	-0.0004736735245	-0.0005020914091	-0.00055711626257
1500	-0.0003608479548	0.0003448852856	-0.00096811616953
1750	-0.0005539243531	-0.0013392948971	-0.00006704702203
2000	-0.0005234246024	-0.0009008213072	-0.00017144180150
2250	-0.0007426748618	-0.0003108655164	-0.00080885599609
2500	-0.0011214687610	-0.0009011704764	-0.00125774633348
2750	-0.0010388160001	-0.0007837835590	-0.00156303633588
3000	-0.0011221861087	-0.0013014425521	-0.00157466312208
3250	-0.0010892090858	-0.0006593952610	-0.00175837602518
3500	-0.0013928374964	-0.0014038721192	-0.00186264006860
3750	-0.0017744922824	-0.0013364603183	-0.00234728581314
4000	-0.0016775456523	-0.0011620659057	-0.00263952976294
4250	-0.0013185468464	-0.0017209440443	-0.00249583265749
4500	-0.0016351554446	-0.0019160089803	-0.00142551360680
4750	-0.0019146464193	-0.0021005178179	-0.00244951279293
5000	-0.0021138928640	-0.0019195377419	-0.00259720175650

Table A2.48 KI1, Spring, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	627884.5	647908.5	656373.5	662074.0	663079.5
250	626450.5	645767.0	654155.0	658587.0	662736.5
500	629538.0	644266.0	654856.5	659519.5	662476.0
750	626060.0	642299.0	651915.5	655623.5	658454.5
1000	627876.5	641283.0	649126.5	653330.5	655750.5
1250	625304.0	642232.0	647677.0	652804.5	655868.5
1500	622893.5	637875.5	647351.5	649238.0	653570.0
1750	626060.5	640165.0	642898.0	648053.0	651381.5
2000	621744.0	636454.5	644627.0	646333.5	650008.5
2250	621506.5	631830.0	641188.5	642572.0	647810.0
2500	621893.5	631795.0	639584.0	641838.5	643653.0
2750	623114.0	632825.0	638736.5	639597.0	642442.0
3000	620889.5	629487.0	634891.0	638057.0	641881.5
3250	620675.0	630399.0	635615.5	635728.5	637525.0
3500	619406.5	625279.5	634081.0	634206.5	634751.5
3750	620259.5	627438.5	628222.0	632154.0	632356.5
4000	616791.5	625434.0	627814.5	630656.5	631616.5
4250	615915.0	624148.5	628528.5	629176.0	628992.0
4500	614680.0	622022.5	626616.5	626877.5	627777.0
4750	616277.5	622552.5	624224.5	629090.0	626801.5
5000	615652.5	619718.0	621363.0	621500.0	622734.0

Table A2.49 KI1, Spring, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9764	0.9668	0.9560	0.8956	0.6672	0.3760	0.1378	0.0320	0
250	0.9774	0.9706	0.9594	0.8968	0.6782	0.3916	0.1460	0.0320	0
500	0.9722	0.9624	0.9516	0.8882	0.6856	0.3836	0.1438	0.0348	0
750	0.9794	0.9734	0.9606	0.9036	0.7010	0.4098	0.1542	0.0390	0
1000	0.9758	0.9670	0.9572	0.9044	0.7010	0.4014	0.1566	0.0390	0
1250	0.9812	0.9750	0.9658	0.9112	0.7178	0.4202	0.1642	0.0436	0
1500	0.9816	0.9754	0.9674	0.9142	0.7258	0.4300	0.1788	0.0450	0
1750	0.9844	0.9772	0.9654	0.9166	0.7258	0.4380	0.1846	0.0496	0
2000	0.9830	0.9770	0.9680	0.9258	0.7462	0.4616	0.1940	0.0538	0
2250	0.9874	0.9800	0.9714	0.9264	0.7558	0.4690	0.1960	0.0580	0
2500	0.9852	0.9774	0.9702	0.9268	0.7642	0.4868	0.2194	0.0586	0
2750	0.9846	0.9780	0.9692	0.9316	0.7664	0.4892	0.2222	0.0618	0
3000	0.9868	0.9830	0.9760	0.9404	0.7830	0.5050	0.2286	0.0622	0
3250	0.9882	0.9844	0.9782	0.9352	0.7756	0.4918	0.2276	0.0708	0
3500	0.9918	0.9858	0.9792	0.9424	0.7852	0.5178	0.2456	0.0768	0
3750	0.9896	0.9832	0.9764	0.9434	0.7912	0.5190	0.2470	0.0768	0
4000	0.9896	0.9842	0.9798	0.9498	0.8050	0.5396	0.2644	0.0840	0
4250	0.9896	0.9854	0.9794	0.9480	0.8102	0.5492	0.2748	0.0894	0
4500	0.9924	0.9896	0.9846	0.9598	0.8266	0.5666	0.2824	0.0954	0
4750	0.9916	0.9886	0.9816	0.9522	0.8250	0.5672	0.2764	0.0874	0
5000	0.9908	0.9872	0.9828	0.9584	0.8442	0.5888	0.2952	0.0994	0

Table A2.50 KI1, Spring, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0010	0.0038	0.0034	0.0012	0.0110	0.0156	0.0082	0.0000	0
500	-0.0042	-0.0044	-0.0044	-0.0074	0.0184	0.0076	0.0060	0.0028	0
750	0.0030	0.0066	0.0046	0.0080	0.0338	0.0338	0.0164	0.0070	0
1000	-0.0006	0.0002	0.0012	0.0088	0.0338	0.0254	0.0188	0.0070	0
1250	0.0048	0.0082	0.0098	0.0156	0.0506	0.0442	0.0264	0.0116	0
1500	0.0052	0.0086	0.0114	0.0186	0.0586	0.0540	0.0410	0.0130	0
1750	0.0080	0.0104	0.0094	0.0210	0.0586	0.0620	0.0468	0.0176	0
2000	0.0066	0.0102	0.0120	0.0302	0.0790	0.0856	0.0562	0.0218	0
2250	0.0110	0.0132	0.0154	0.0308	0.0886	0.0930	0.0582	0.0260	0
2500	0.0088	0.0106	0.0142	0.0312	0.0970	0.1108	0.0816	0.0266	0
2750	0.0082	0.0112	0.0132	0.0360	0.0992	0.1132	0.0844	0.0298	0
3000	0.0104	0.0162	0.0200	0.0448	0.1158	0.1290	0.0908	0.0302	0
3250	0.0118	0.0176	0.0222	0.0396	0.1084	0.1158	0.0898	0.0388	0
3500	0.0154	0.0190	0.0232	0.0468	0.1180	0.1418	0.1078	0.0448	0
3750	0.0132	0.0164	0.0204	0.0478	0.1240	0.1430	0.1092	0.0448	0
4000	0.0132	0.0174	0.0238	0.0542	0.1378	0.1636	0.1266	0.0520	0
4250	0.0132	0.0186	0.0234	0.0524	0.1430	0.1732	0.1370	0.0574	0
4500	0.0160	0.0228	0.0286	0.0642	0.1594	0.1906	0.1446	0.0634	0
4750	0.0152	0.0218	0.0256	0.0566	0.1578	0.1912	0.1386	0.0554	0
5000	0.0144	0.0204	0.0268	0.0628	0.1770	0.2128	0.1574	0.0674	0

Table A2.51 KI1, Spring, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.3454	0.3182	0.2960	0.2206	0.1154	0.0458	0.0124	0.0020	0
250	0.3434	0.3160	0.2886	0.2150	0.1124	0.0458	0.0134	0.0022	0
500	0.3508	0.3284	0.2970	0.2194	0.1152	0.0468	0.0138	0.0030	0
750	0.3638	0.3380	0.3120	0.2328	0.1280	0.0534	0.0154	0.0026	0
1000	0.3722	0.3412	0.3150	0.2312	0.1178	0.0504	0.0138	0.0026	0
1250	0.3724	0.3484	0.3180	0.2424	0.1302	0.0538	0.0190	0.0044	0
1500	0.3836	0.3558	0.3306	0.2516	0.1306	0.0596	0.0168	0.0028	0
1750	0.3978	0.3712	0.3444	0.2612	0.1480	0.0674	0.0226	0.0056	0
2000	0.3952	0.3614	0.3348	0.2524	0.1348	0.0584	0.0194	0.0050	0
2250	0.4114	0.3814	0.3532	0.2694	0.1536	0.0664	0.0200	0.0052	0
2500	0.4304	0.3984	0.3724	0.2854	0.1574	0.0692	0.0252	0.0060	0
2750	0.4346	0.4076	0.3770	0.2940	0.1646	0.0758	0.0256	0.0064	0
3000	0.4372	0.4098	0.3794	0.2952	0.1690	0.0760	0.0276	0.0068	0
3250	0.4534	0.4206	0.3926	0.3056	0.1752	0.0798	0.0290	0.0082	0
3500	0.4716	0.4424	0.4144	0.3220	0.1882	0.0904	0.0294	0.0096	0
3750	0.4814	0.4498	0.4236	0.3326	0.1944	0.0888	0.0312	0.0076	0
4000	0.4800	0.4502	0.4202	0.3302	0.1962	0.0954	0.0352	0.0078	0
4250	0.4962	0.4662	0.4354	0.3458	0.2056	0.1036	0.0384	0.0126	0
4500	0.5006	0.4748	0.4434	0.3538	0.2182	0.1120	0.0434	0.0114	0
4750	0.5062	0.4756	0.4436	0.3596	0.2180	0.1036	0.0438	0.0106	0
5000	0.5212	0.4950	0.4682	0.3752	0.2314	0.1190	0.0480	0.0160	0

Table A2.52 KI1, Spring, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	-0.0020	-0.0022	-0.0074	-0.0056	-0.0030	0.0000	0.0010	0.0002	0
500	0.0054	0.0102	0.0010	-0.0012	-0.0002	0.0010	0.0014	0.0010	0
750	0.0184	0.0198	0.0160	0.0122	0.0126	0.0076	0.0030	0.0006	0
1000	0.0268	0.0230	0.0190	0.0106	0.0024	0.0046	0.0014	0.0006	0
1250	0.0270	0.0302	0.0220	0.0218	0.0148	0.0080	0.0066	0.0024	0
1500	0.0382	0.0376	0.0346	0.0310	0.0152	0.0138	0.0044	0.0008	0
1750	0.0524	0.0530	0.0484	0.0406	0.0326	0.0216	0.0102	0.0036	0
2000	0.0498	0.0432	0.0388	0.0318	0.0194	0.0126	0.0070	0.0030	0
2250	0.0660	0.0632	0.0572	0.0488	0.0382	0.0206	0.0076	0.0032	0
2500	0.0850	0.0802	0.0764	0.0648	0.0420	0.0234	0.0128	0.0040	0
2750	0.0892	0.0894	0.0810	0.0734	0.0492	0.0300	0.0132	0.0044	0
3000	0.0918	0.0916	0.0834	0.0746	0.0536	0.0302	0.0152	0.0048	0
3250	0.1080	0.1024	0.0966	0.0850	0.0598	0.0340	0.0166	0.0062	0
3500	0.1262	0.1242	0.1184	0.1014	0.0728	0.0446	0.0170	0.0076	0
3750	0.1360	0.1316	0.1276	0.1120	0.0790	0.0430	0.0188	0.0056	0
4000	0.1346	0.1320	0.1242	0.1096	0.0808	0.0496	0.0228	0.0058	0
4250	0.1508	0.1480	0.1394	0.1252	0.0902	0.0578	0.0260	0.0106	0
4500	0.1552	0.1566	0.1474	0.1332	0.1028	0.0662	0.0310	0.0094	0
4750	0.1608	0.1574	0.1476	0.1390	0.1026	0.0578	0.0314	0.0086	0
5000	0.1758	0.1768	0.1722	0.1546	0.1160	0.0732	0.0356	0.0140	0

Table A2.53 KI1, Spring, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4726	0.4390	0.3544	0.2212	0.1096	0.0400	0.0098	0
250	0.5014	0.4718	0.4436	0.3528	0.2162	0.1080	0.0406	0.0114	0
500	0.5032	0.4736	0.4458	0.3584	0.2204	0.1110	0.0426	0.0108	0
750	0.5222	0.4926	0.4636	0.3730	0.2336	0.1230	0.0468	0.0112	0
1000	0.5336	0.5038	0.4666	0.3804	0.2324	0.1134	0.0446	0.0106	0
1250	0.5316	0.5034	0.4734	0.3818	0.2438	0.1264	0.0486	0.0160	0
1500	0.5444	0.5136	0.4834	0.3926	0.2522	0.1274	0.0528	0.0134	0
1750	0.5508	0.5244	0.4946	0.4062	0.2630	0.1436	0.0610	0.0200	0
2000	0.5590	0.5292	0.4996	0.4060	0.2542	0.1306	0.0530	0.0158	0
2250	0.5622	0.5350	0.5078	0.4200	0.2710	0.1480	0.0612	0.0168	0
2500	0.5802	0.5546	0.5244	0.4412	0.2870	0.1522	0.0624	0.0196	0
2750	0.5886	0.5610	0.5340	0.4458	0.2976	0.1602	0.0690	0.0210	0
3000	0.5900	0.5642	0.5366	0.4462	0.2970	0.1630	0.0698	0.0236	0
3250	0.6090	0.5830	0.5580	0.4632	0.3070	0.1700	0.0746	0.0234	0
3500	0.6128	0.5878	0.5594	0.4802	0.3232	0.1836	0.0832	0.0256	0
3750	0.6320	0.6088	0.5752	0.4884	0.3342	0.1888	0.0832	0.0260	0
4000	0.6432	0.6102	0.5814	0.4904	0.3316	0.1902	0.0872	0.0284	0
4250	0.6440	0.6186	0.5872	0.5040	0.3474	0.2022	0.0966	0.0322	0
4500	0.6456	0.6254	0.5952	0.5078	0.3554	0.2130	0.1028	0.0358	0
4750	0.6526	0.6268	0.6008	0.5144	0.3610	0.2120	0.0968	0.0342	0
5000	0.6670	0.6454	0.6192	0.5328	0.3770	0.2252	0.1086	0.0414	0

Table A2.54 KI1, Spring, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0014	-0.0008	0.0046	-0.0016	-0.0050	-0.0016	0.0006	0.0016	0
500	0.0032	0.0010	0.0068	0.0040	-0.0008	0.0014	0.0026	0.0010	0
750	0.0222	0.0200	0.0246	0.0186	0.0124	0.0134	0.0068	0.0014	0
1000	0.0336	0.0312	0.0276	0.0260	0.0112	0.0038	0.0046	0.0008	0
1250	0.0316	0.0308	0.0344	0.0274	0.0226	0.0168	0.0086	0.0062	0
1500	0.0444	0.0410	0.0444	0.0382	0.0310	0.0178	0.0128	0.0036	0
1750	0.0508	0.0518	0.0556	0.0518	0.0418	0.0340	0.0210	0.0102	0
2000	0.0590	0.0566	0.0606	0.0516	0.0330	0.0210	0.0130	0.0060	0
2250	0.0622	0.0624	0.0688	0.0656	0.0498	0.0384	0.0212	0.0070	0
2500	0.0802	0.0820	0.0854	0.0868	0.0658	0.0426	0.0224	0.0098	0
2750	0.0886	0.0884	0.0950	0.0914	0.0764	0.0506	0.0290	0.0112	0
3000	0.0900	0.0916	0.0976	0.0918	0.0758	0.0534	0.0298	0.0138	0
3250	0.1090	0.1104	0.1190	0.1088	0.0858	0.0604	0.0346	0.0136	0
3500	0.1128	0.1152	0.1204	0.1258	0.1020	0.0740	0.0432	0.0158	0
3750	0.1320	0.1362	0.1362	0.1340	0.1130	0.0792	0.0432	0.0162	0
4000	0.1432	0.1376	0.1424	0.1360	0.1104	0.0806	0.0472	0.0186	0
4250	0.1440	0.1460	0.1482	0.1496	0.1262	0.0926	0.0566	0.0224	0
4500	0.1456	0.1528	0.1562	0.1534	0.1342	0.1034	0.0628	0.0260	0
4750	0.1526	0.1542	0.1618	0.1600	0.1398	0.1024	0.0568	0.0244	0
5000	0.1670	0.1728	0.1802	0.1784	0.1558	0.1156	0.0686	0.0316	0

Table A2.55 KI2, Annual, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.014633484	0.9828337648	1.042846221
250	1.013759794	0.9818727060	1.041334738
500	1.013623923	0.9836723952	1.041680612
750	1.013634674	0.9827794324	1.041176573
1000	1.013208195	0.9813687807	1.041611974
1250	1.013015567	0.9823257834	1.040653420
1500	1.012062557	0.9820936835	1.041121261
1750	1.012192563	0.9809542676	1.040329252
2000	1.011743567	0.9814840482	1.040002731
2250	1.011708965	0.9811717459	1.039912011
2500	1.011542635	0.9803152729	1.039292174
2750	1.011269866	0.9793585032	1.039133181
3000	1.011240691	0.9789239976	1.038534410
3250	1.010530742	0.9799243954	1.038572928
3500	1.010090390	0.9793542959	1.037901433
3750	1.009844773	0.9782946907	1.037973800
4000	1.009433633	0.9790527867	1.037971228
4250	1.009562366	0.9775588057	1.037207758
4500	1.008755995	0.9773672302	1.036779025
4750	1.008557611	0.9777963165	1.035167582
5000	1.008581696	0.9773801068	1.036287581

Table A2.56 KI2, Annual, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.00000000000000	0.000000000000
250	-0.0008736903732	-0.00096105877840	-0.001511483299
500	-0.0010095610606	0.00083863041078	-0.001165608741
750	-0.0009988095463	-0.00005433233366	-0.001669647836
1000	-0.0014252887403	-0.00146498408332	-0.001234247484
1250	-0.0016179171379	-0.00050798131188	-0.002192801349
1500	-0.0025709270519	-0.00074008123092	-0.001724960434
1750	-0.0024409204651	-0.00187949715043	-0.002516969477
2000	-0.0028899169050	-0.00134971650773	-0.002843490329
2250	-0.0029245188553	-0.00166201881413	-0.002934210110
2500	-0.0030908484303	-0.00251849188433	-0.003554046877
2750	-0.0033636174569	-0.00347526157381	-0.003713040164
3000	-0.0033927929284	-0.00390976714692	-0.004311810824
3250	-0.0041027417294	-0.00290936932129	-0.004273293069
3500	-0.0045430937160	-0.00347946888240	-0.004944788114
3750	-0.0047887108117	-0.00453907409743	-0.004872420923
4000	-0.0051998509029	-0.00378097807511	-0.004874992906
4250	-0.0050711175554	-0.00527495902733	-0.005638462605
4500	-0.0058774891850	-0.00546653460057	-0.006067196016
4750	-0.0060758729283	-0.00503744827455	-0.007678639010
5000	-0.0060517876875	-0.00545365796205	-0.006558639860

Table A2.57 KI2, Annual, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	882348.5	942823.0	1011232.0	1086373.0	1172306.0
250	884060.0	942669.0	1010872.5	1072097.5	1151699.5
500	882089.0	942207.5	1004871.0	1073016.5	1140817.0
750	880048.0	933486.5	999532.5	1068101.0	1141780.5
1000	880166.5	937762.5	999989.5	1060388.0	1135283.0
1250	874436.0	929546.0	996183.0	1050828.0	1121649.5
1500	881386.5	930769.0	989083.0	1047278.5	1104201.5
1750	875994.0	924269.5	979741.0	1036645.0	1099399.0
2000	873976.0	926432.0	981491.0	1036933.0	1089523.0
2250	876172.5	927307.5	984372.0	1030510.0	1089638.0
2500	872669.0	926652.0	970474.0	1029386.0	1080205.5
2750	872008.5	918257.5	964100.0	1020921.5	1074101.5
3000	869949.0	917691.5	962461.0	1015361.0	1068416.0
3250	873819.0	917718.0	961361.0	1007823.0	1062052.5
3500	869835.0	916897.0	954102.5	1004421.5	1052205.0
3750	870742.0	915255.5	960210.5	1000282.0	1051087.5
4000	869295.5	908228.0	952609.0	997041.5	1044093.0
4250	864713.0	903471.0	946519.0	992140.5	1030417.0
4500	867638.5	906999.5	944830.0	983098.0	1020248.5
4750	864705.0	902309.0	933477.0	973883.5	1008418.0
5000	865236.5	895642.0	932663.5	973600.5	1017645.0

Table A2.58 KI2, Annual, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.7658	0.7384	0.7144	0.6306	0.4856	0.3424	0.2268	0.1412	0.0060
250	0.7736	0.7524	0.7268	0.6442	0.5020	0.3526	0.2332	0.1516	0.0058
500	0.7736	0.7462	0.7208	0.6380	0.4902	0.3536	0.2386	0.1480	0.0064
750	0.7816	0.7546	0.7278	0.6524	0.5122	0.3684	0.2448	0.1576	0.0054
1000	0.7788	0.7538	0.7250	0.6390	0.4928	0.3452	0.2320	0.1480	0.0076
1250	0.7878	0.7638	0.7414	0.6670	0.5250	0.3776	0.2566	0.1698	0.0062
1500	0.7870	0.7666	0.7416	0.6652	0.5110	0.3692	0.2534	0.1698	0.0074
1750	0.7862	0.7670	0.7454	0.6686	0.5304	0.3836	0.2680	0.1730	0.0086
2000	0.7990	0.7742	0.7504	0.6768	0.5360	0.3994	0.2726	0.1700	0.0064
2250	0.7980	0.7774	0.7492	0.6694	0.5316	0.3812	0.2650	0.1770	0.0074
2500	0.8028	0.7786	0.7582	0.6792	0.5380	0.3942	0.2734	0.1860	0.0104
2750	0.7962	0.7694	0.7524	0.6740	0.5334	0.3914	0.2794	0.1864	0.0100
3000	0.7996	0.7786	0.7536	0.6810	0.5522	0.4114	0.2824	0.1878	0.0096
3250	0.8086	0.7846	0.7646	0.6888	0.5562	0.4146	0.2852	0.1912	0.0094
3500	0.8072	0.7888	0.7654	0.6934	0.5490	0.4110	0.2890	0.2022	0.0076
3750	0.8032	0.7840	0.7632	0.6900	0.5534	0.4228	0.2932	0.1984	0.0104
4000	0.8122	0.7922	0.7726	0.7002	0.5598	0.4172	0.2906	0.1976	0.0102
4250	0.8262	0.8030	0.7808	0.7074	0.5744	0.4352	0.3146	0.2208	0.0138
4500	0.8260	0.8010	0.7782	0.7000	0.5640	0.4306	0.3134	0.2218	0.0148
4750	0.8300	0.8102	0.7880	0.7194	0.5902	0.4490	0.3244	0.2254	0.0120
5000	0.8280	0.8084	0.7888	0.7170	0.5914	0.4408	0.3204	0.2200	0.0148

Table A2.59 KI2, Annual, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0078	0.0140	0.0124	0.0136	0.0164	0.0102	0.0064	0.0104	-0.0002
500	0.0078	0.0078	0.0064	0.0074	0.0046	0.0112	0.0118	0.0068	0.0004
750	0.0158	0.0162	0.0134	0.0218	0.0266	0.0260	0.0180	0.0164	-0.0006
1000	0.0130	0.0154	0.0106	0.0084	0.0072	0.0028	0.0052	0.0068	0.0016
1250	0.0220	0.0254	0.0270	0.0364	0.0394	0.0352	0.0298	0.0286	0.0002
1500	0.0212	0.0282	0.0272	0.0346	0.0254	0.0268	0.0266	0.0286	0.0014
1750	0.0204	0.0286	0.0310	0.0380	0.0448	0.0412	0.0412	0.0318	0.0026
2000	0.0332	0.0358	0.0360	0.0462	0.0504	0.0570	0.0458	0.0288	0.0004
2250	0.0322	0.0390	0.0348	0.0388	0.0460	0.0388	0.0382	0.0358	0.0014
2500	0.0370	0.0402	0.0438	0.0486	0.0524	0.0518	0.0466	0.0448	0.0044
2750	0.0304	0.0310	0.0380	0.0434	0.0478	0.0490	0.0526	0.0452	0.0040
3000	0.0338	0.0402	0.0392	0.0504	0.0666	0.0690	0.0556	0.0466	0.0036
3250	0.0428	0.0462	0.0502	0.0582	0.0706	0.0722	0.0584	0.0500	0.0034
3500	0.0414	0.0504	0.0510	0.0628	0.0634	0.0686	0.0622	0.0610	0.0016
3750	0.0374	0.0456	0.0488	0.0594	0.0678	0.0804	0.0664	0.0572	0.0044
4000	0.0464	0.0538	0.0582	0.0696	0.0742	0.0748	0.0638	0.0564	0.0042
4250	0.0604	0.0646	0.0664	0.0768	0.0888	0.0928	0.0878	0.0796	0.0078
4500	0.0602	0.0626	0.0638	0.0694	0.0784	0.0882	0.0866	0.0806	0.0088
4750	0.0642	0.0718	0.0736	0.0888	0.1046	0.1066	0.0976	0.0842	0.0060
5000	0.0622	0.0700	0.0744	0.0864	0.1058	0.0984	0.0936	0.0788	0.0088

Table A2.60 KI2, Annual, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.1532	0.1478	0.1418	0.1196	0.0896	0.0632	0.0448	0.0306	0.0014
250	0.1598	0.1532	0.1466	0.1256	0.0976	0.0752	0.0540	0.0384	0.0020
500	0.1644	0.1560	0.1476	0.1268	0.0952	0.0716	0.0518	0.0346	0.0026
750	0.1716	0.1650	0.1542	0.1326	0.1004	0.0744	0.0544	0.0376	0.0022
1000	0.1712	0.1644	0.1574	0.1340	0.1038	0.0762	0.0540	0.0382	0.0034
1250	0.1856	0.1778	0.1700	0.1500	0.1176	0.0880	0.0616	0.0426	0.0022
1500	0.1916	0.1834	0.1752	0.1508	0.1202	0.0880	0.0634	0.0392	0.0026
1750	0.1944	0.1878	0.1798	0.1606	0.1232	0.0894	0.0664	0.0472	0.0030
2000	0.1950	0.1888	0.1782	0.1568	0.1230	0.0898	0.0636	0.0434	0.0022
2250	0.2064	0.1994	0.1894	0.1624	0.1244	0.0910	0.0654	0.0454	0.0028
2500	0.2084	0.2018	0.1936	0.1710	0.1344	0.1030	0.0748	0.0514	0.0034
2750	0.2142	0.2058	0.1976	0.1752	0.1392	0.1070	0.0816	0.0592	0.0026
3000	0.2278	0.2182	0.2100	0.1842	0.1478	0.1088	0.0784	0.0552	0.0030
3250	0.2294	0.2216	0.2104	0.1830	0.1414	0.1108	0.0814	0.0554	0.0038
3500	0.2418	0.2318	0.2190	0.1932	0.1526	0.1172	0.0816	0.0550	0.0034
3750	0.2440	0.2372	0.2286	0.1990	0.1556	0.1200	0.0864	0.0610	0.0026
4000	0.2482	0.2398	0.2302	0.2018	0.1608	0.1228	0.0886	0.0624	0.0044
4250	0.2526	0.2440	0.2368	0.2076	0.1674	0.1358	0.0996	0.0702	0.0046
4500	0.2620	0.2532	0.2436	0.2152	0.1792	0.1396	0.1034	0.0738	0.0060
4750	0.2768	0.2684	0.2568	0.2272	0.1824	0.1458	0.1106	0.0778	0.0054
5000	0.2724	0.2624	0.2526	0.2200	0.1776	0.1392	0.1064	0.0746	0.0066

Table A2.61 KI2, Annual, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0066	0.0054	0.0048	0.0060	0.0080	0.0120	0.0092	0.0078	0.0006
500	0.0112	0.0082	0.0058	0.0072	0.0056	0.0084	0.0070	0.0040	0.0012
750	0.0184	0.0172	0.0124	0.0130	0.0108	0.0112	0.0096	0.0070	0.0008
1000	0.0180	0.0166	0.0156	0.0144	0.0142	0.0130	0.0092	0.0076	0.0020
1250	0.0324	0.0300	0.0282	0.0304	0.0280	0.0248	0.0168	0.0120	0.0008
1500	0.0384	0.0356	0.0334	0.0312	0.0306	0.0248	0.0186	0.0086	0.0012
1750	0.0412	0.0400	0.0380	0.0410	0.0336	0.0262	0.0216	0.0166	0.0016
2000	0.0418	0.0410	0.0364	0.0372	0.0334	0.0266	0.0188	0.0128	0.0008
2250	0.0532	0.0516	0.0476	0.0428	0.0348	0.0278	0.0206	0.0148	0.0014
2500	0.0552	0.0540	0.0518	0.0514	0.0448	0.0398	0.0300	0.0208	0.0020
2750	0.0610	0.0580	0.0558	0.0556	0.0496	0.0438	0.0368	0.0286	0.0012
3000	0.0746	0.0704	0.0682	0.0646	0.0582	0.0456	0.0336	0.0246	0.0016
3250	0.0762	0.0738	0.0686	0.0634	0.0518	0.0476	0.0366	0.0248	0.0024
3500	0.0886	0.0840	0.0772	0.0736	0.0630	0.0540	0.0368	0.0244	0.0020
3750	0.0908	0.0894	0.0868	0.0794	0.0660	0.0568	0.0416	0.0304	0.0012
4000	0.0950	0.0920	0.0884	0.0822	0.0712	0.0596	0.0438	0.0318	0.0030
4250	0.0994	0.0962	0.0950	0.0880	0.0778	0.0726	0.0548	0.0396	0.0032
4500	0.1088	0.1054	0.1018	0.0956	0.0896	0.0764	0.0586	0.0432	0.0046
4750	0.1236	0.1206	0.1150	0.1076	0.0928	0.0826	0.0658	0.0472	0.0040
5000	0.1192	0.1146	0.1108	0.1004	0.0880	0.0760	0.0616	0.0440	0.0052

Table A2.62 KI2, Annual, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4880	0.4786	0.4442	0.3760	0.3118	0.2504	0.1984	0.0218
250	0.5258	0.5130	0.4962	0.4588	0.3936	0.3276	0.2604	0.2026	0.0278
500	0.5366	0.5236	0.5074	0.4680	0.3994	0.3348	0.2658	0.2096	0.0254
750	0.5360	0.5194	0.5058	0.4702	0.4028	0.3346	0.2798	0.2230	0.0242
1000	0.5448	0.5324	0.5196	0.4764	0.4122	0.3434	0.2796	0.2160	0.0276
1250	0.5584	0.5462	0.5338	0.4908	0.4292	0.3606	0.2930	0.2312	0.0280
1500	0.5726	0.5618	0.5470	0.5094	0.4428	0.3734	0.3098	0.2416	0.0264
1750	0.5840	0.5712	0.5574	0.5164	0.4468	0.3796	0.3114	0.2458	0.0332
2000	0.5852	0.5738	0.5638	0.5270	0.4550	0.3888	0.3194	0.2506	0.0288
2250	0.5892	0.5770	0.5674	0.5270	0.4626	0.3884	0.3234	0.2512	0.0324
2500	0.5946	0.5826	0.5718	0.5374	0.4690	0.3976	0.3274	0.2590	0.0356
2750	0.6098	0.5956	0.5834	0.5406	0.4788	0.4028	0.3330	0.2676	0.0416
3000	0.6106	0.5954	0.5808	0.5460	0.4840	0.4130	0.3450	0.2786	0.0384
3250	0.6178	0.6070	0.5970	0.5584	0.4922	0.4204	0.3522	0.2828	0.0400
3500	0.6352	0.6242	0.6086	0.5702	0.5036	0.4298	0.3634	0.2954	0.0398
3750	0.6330	0.6232	0.6088	0.5686	0.5054	0.4340	0.3698	0.2988	0.0446
4000	0.6482	0.6370	0.6242	0.5874	0.5138	0.4414	0.3722	0.3040	0.0420
4250	0.6542	0.6424	0.6332	0.5986	0.5320	0.4570	0.3790	0.3084	0.0512
4500	0.6708	0.6574	0.6444	0.6058	0.5424	0.4682	0.3932	0.3194	0.0522
4750	0.6762	0.6648	0.6536	0.6198	0.5554	0.4834	0.4090	0.3336	0.0558
5000	0.6758	0.6664	0.6522	0.6158	0.5456	0.4752	0.4032	0.3340	0.0520

Table A2.63 KI2, Annual, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0258	0.0250	0.0176	0.0146	0.0176	0.0158	0.0100	0.0042	0.0060
500	0.0366	0.0356	0.0288	0.0238	0.0234	0.0230	0.0154	0.0112	0.0036
750	0.0360	0.0314	0.0272	0.0260	0.0268	0.0228	0.0294	0.0246	0.0024
1000	0.0448	0.0444	0.0410	0.0322	0.0362	0.0316	0.0292	0.0176	0.0058
1250	0.0584	0.0582	0.0552	0.0466	0.0532	0.0488	0.0426	0.0328	0.0062
1500	0.0726	0.0738	0.0684	0.0652	0.0668	0.0616	0.0594	0.0432	0.0046
1750	0.0840	0.0832	0.0788	0.0722	0.0708	0.0678	0.0610	0.0474	0.0114
2000	0.0852	0.0858	0.0852	0.0828	0.0790	0.0770	0.0690	0.0522	0.0070
2250	0.0892	0.0890	0.0888	0.0828	0.0866	0.0766	0.0730	0.0528	0.0106
2500	0.0946	0.0946	0.0932	0.0932	0.0930	0.0858	0.0770	0.0606	0.0138
2750	0.1098	0.1076	0.1048	0.0964	0.1028	0.0910	0.0826	0.0692	0.0198
3000	0.1106	0.1074	0.1022	0.1018	0.1080	0.1012	0.0946	0.0802	0.0166
3250	0.1178	0.1190	0.1184	0.1142	0.1162	0.1086	0.1018	0.0844	0.0182
3500	0.1352	0.1362	0.1300	0.1260	0.1276	0.1180	0.1130	0.0970	0.0180
3750	0.1330	0.1352	0.1302	0.1244	0.1294	0.1222	0.1194	0.1004	0.0228
4000	0.1482	0.1490	0.1456	0.1432	0.1378	0.1296	0.1218	0.1056	0.0202
4250	0.1542	0.1544	0.1546	0.1544	0.1560	0.1452	0.1286	0.1100	0.0294
4500	0.1708	0.1694	0.1658	0.1616	0.1664	0.1564	0.1428	0.1210	0.0304
4750	0.1762	0.1768	0.1750	0.1756	0.1794	0.1716	0.1586	0.1352	0.0340
5000	0.1758	0.1784	0.1736	0.1716	0.1696	0.1634	0.1528	0.1356	0.0302

Table A2.64 KI2, Annual, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.003650273	0.9863771620	1.023678534
250	1.003756511	0.9853528110	1.022923494
500	1.003774152	0.9862586742	1.023338068
750	1.003628189	0.9853356662	1.023185664
1000	1.003652145	0.9854185507	1.022355496
1250	1.003383968	0.9854061056	1.023487155
1500	1.003323762	0.9847990923	1.022928063
1750	1.003234479	0.9855054814	1.022293692
2000	1.003246273	0.9851872427	1.023126109
2250	1.003190224	0.9852491385	1.023043047
2500	1.003330462	0.9850371285	1.021545373
2750	1.002882608	0.9846520243	1.022652073
3000	1.003107847	0.9846738175	1.021473720
3250	1.002953461	0.9845893557	1.021651074
3500	1.002943931	0.9840371380	1.022167285
3750	1.002572888	0.9844553739	1.021349465
4000	1.002652027	0.9843298147	1.021534064
4250	1.002655189	0.9841586447	1.021425330
4500	1.002354153	0.9846056417	1.022312031
4750	1.002526411	0.9843464619	1.021918513
5000	1.001958010	0.9833285082	1.020856428

Table A2.65 KI2, Annual, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.000000000000000	0.0000000000000	0.0000000000000
250	0.000106238153004	-0.0010243509863	-0.0007550394798
500	0.000123878864199	-0.0001184878197	-0.0003404655795
750	-0.000022084577497	-0.0010414957504	-0.0004928699011
1000	0.000001871897231	-0.0009586112688	-0.0013230380433
1250	-0.000266304892154	-0.0009710564295	-0.0001913789051
1500	-0.000326511306871	-0.0015780696779	-0.0007504705213
1750	-0.000415794026409	-0.0008716805749	-0.0013848419553
2000	-0.000404000259083	-0.0011899192536	-0.0005524247387
2250	-0.000460049014814	-0.0011280234752	-0.0006354866134
2500	-0.000319811621545	-0.0013400335348	-0.0021331606328
2750	-0.000767664738123	-0.0017251376572	-0.0010264610902
3000	-0.000542426401945	-0.0017033444749	-0.0022048136783
3250	-0.000696812546279	-0.0017878063236	-0.0020274597836
3500	-0.000706342475602	-0.0023400239864	-0.0015112484546
3750	-0.001077385237771	-0.0019217880603	-0.0023290690442
4000	-0.000998246598180	-0.0020473473276	-0.0021444696359
4250	-0.000995083980945	-0.0022185172769	-0.0022532036630
4500	-0.001296120435148	-0.0017715203242	-0.0013665024967
4750	-0.001123861893984	-0.0020307001039	-0.0017600213980
5000	-0.001692263041849	-0.0030486538159	-0.0028221060915

Table A2.66 KI2, Annual, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	866184.5	902086.0	917374.5	932270.5	939103.5
250	864722.0	897569.0	913217.0	924302.0	932480.5
500	863678.5	894710.0	915027.0	924221.5	933690.5
750	863007.5	897646.5	908805.5	920101.5	930613.0
1000	860758.5	890954.5	908179.0	917948.0	925099.5
1250	861064.0	888406.0	907048.5	914491.0	920513.5
1500	860910.0	891909.5	907301.0	917336.0	923099.0
1750	859704.5	888331.5	904647.0	912301.5	920440.0
2000	857842.5	887942.0	903648.5	911038.0	916291.5
2250	858278.0	885420.0	901358.0	911571.5	917601.5
2500	852717.5	881075.0	892462.5	904411.0	913710.5
2750	856385.5	880485.0	895398.5	905150.0	908979.5
3000	852974.5	877400.5	892628.0	903020.0	908852.5
3250	852676.0	879532.0	894502.5	900729.0	905003.5
3500	849057.5	875912.5	889312.0	896935.5	902552.5
3750	852243.0	873285.0	885683.5	894895.5	899854.5
4000	847357.5	873907.5	884749.5	896340.0	897239.5
4250	847628.0	869632.5	884485.5	890263.5	895149.5
4500	847327.5	864983.0	880734.5	886066.0	888602.5
4750	851170.5	868294.5	878344.5	889323.5	898441.5
5000	848654.5	865626.0	878334.0	879760.0	883592.0

Table A2.67 KI2, Annual, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9060	0.8778	0.8466	0.7296	0.4838	0.2500	0.0932	0.0262	0
250	0.9114	0.8896	0.8608	0.7536	0.5096	0.2648	0.0996	0.0274	0
500	0.9142	0.8900	0.8630	0.7468	0.4936	0.2586	0.1086	0.0274	0
750	0.9064	0.8814	0.8554	0.7550	0.5028	0.2648	0.1090	0.0352	0
1000	0.9256	0.9022	0.8768	0.7764	0.5142	0.2670	0.1038	0.0300	0
1250	0.9224	0.8980	0.8708	0.7712	0.5232	0.2752	0.1064	0.0362	0
1500	0.9154	0.8940	0.8656	0.7622	0.5148	0.2702	0.1124	0.0354	0
1750	0.9258	0.9074	0.8788	0.7744	0.5356	0.2768	0.1112	0.0348	0
2000	0.9194	0.9000	0.8758	0.7752	0.5274	0.2914	0.1248	0.0384	0
2250	0.9302	0.9092	0.8872	0.7816	0.5344	0.2856	0.1188	0.0360	0
2500	0.9350	0.9162	0.8928	0.7926	0.5556	0.3118	0.1270	0.0406	0
2750	0.9324	0.9144	0.8868	0.7970	0.5634	0.3034	0.1344	0.0392	0
3000	0.9388	0.9194	0.8992	0.8052	0.5708	0.3244	0.1370	0.0442	0
3250	0.9434	0.9266	0.9014	0.8080	0.5696	0.3244	0.1370	0.0410	0
3500	0.9446	0.9298	0.9076	0.8146	0.5836	0.3392	0.1546	0.0514	0
3750	0.9418	0.9260	0.9076	0.8206	0.6008	0.3448	0.1528	0.0512	0
4000	0.9444	0.9316	0.9126	0.8222	0.6000	0.3498	0.1512	0.0486	0
4250	0.9474	0.9292	0.9090	0.8226	0.6126	0.3616	0.1606	0.0504	0
4500	0.9472	0.9328	0.9146	0.8322	0.6220	0.3650	0.1696	0.0524	0
4750	0.9464	0.9312	0.9120	0.8344	0.6146	0.3530	0.1586	0.0572	0
5000	0.9534	0.9366	0.9192	0.8368	0.6282	0.3704	0.1640	0.0630	0

Table A2.68 KI2, Annual, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0054	0.0118	0.0142	0.0240	0.0258	0.0148	0.0064	0.0012	0
500	0.0082	0.0122	0.0164	0.0172	0.0098	0.0086	0.0154	0.0012	0
750	0.0004	0.0036	0.0088	0.0254	0.0190	0.0148	0.0158	0.0090	0
1000	0.0196	0.0244	0.0302	0.0468	0.0304	0.0170	0.0106	0.0038	0
1250	0.0164	0.0202	0.0242	0.0416	0.0394	0.0252	0.0132	0.0100	0
1500	0.0094	0.0162	0.0190	0.0326	0.0310	0.0202	0.0192	0.0092	0
1750	0.0198	0.0296	0.0322	0.0448	0.0518	0.0268	0.0180	0.0086	0
2000	0.0134	0.0222	0.0292	0.0456	0.0436	0.0414	0.0316	0.0122	0
2250	0.0242	0.0314	0.0406	0.0520	0.0506	0.0356	0.0256	0.0098	0
2500	0.0290	0.0384	0.0462	0.0630	0.0718	0.0618	0.0338	0.0144	0
2750	0.0264	0.0366	0.0402	0.0674	0.0796	0.0534	0.0412	0.0130	0
3000	0.0328	0.0416	0.0526	0.0756	0.0870	0.0744	0.0438	0.0180	0
3250	0.0374	0.0488	0.0548	0.0784	0.0858	0.0744	0.0438	0.0148	0
3500	0.0386	0.0520	0.0610	0.0850	0.0998	0.0892	0.0614	0.0252	0
3750	0.0358	0.0482	0.0610	0.0910	0.1170	0.0948	0.0596	0.0250	0
4000	0.0384	0.0538	0.0660	0.0926	0.1162	0.0998	0.0580	0.0224	0
4250	0.0414	0.0514	0.0624	0.0930	0.1288	0.1116	0.0674	0.0242	0
4500	0.0412	0.0550	0.0680	0.1026	0.1382	0.1150	0.0764	0.0262	0
4750	0.0404	0.0534	0.0654	0.1048	0.1308	0.1030	0.0654	0.0310	0
5000	0.0474	0.0588	0.0726	0.1072	0.1444	0.1204	0.0708	0.0368	0

Table A2.69 KI2, Annual, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.1936	0.1710	0.1550	0.1104	0.0564	0.0250	0.0088	0.0022	0
250	0.2106	0.1946	0.1746	0.1262	0.0632	0.0272	0.0090	0.0022	0
500	0.2124	0.1916	0.1710	0.1214	0.0608	0.0238	0.0080	0.0010	0
750	0.2230	0.2018	0.1850	0.1336	0.0660	0.0292	0.0086	0.0036	0
1000	0.2252	0.2052	0.1836	0.1320	0.0684	0.0274	0.0110	0.0022	0
1250	0.2256	0.2072	0.1880	0.1320	0.0730	0.0282	0.0084	0.0018	0
1500	0.2430	0.2230	0.2034	0.1410	0.0696	0.0288	0.0110	0.0032	0
1750	0.2418	0.2204	0.2010	0.1452	0.0760	0.0322	0.0116	0.0028	0
2000	0.2404	0.2162	0.1966	0.1450	0.0778	0.0334	0.0116	0.0034	0
2250	0.2480	0.2266	0.2058	0.1492	0.0816	0.0360	0.0130	0.0034	0
2500	0.2576	0.2356	0.2116	0.1534	0.0838	0.0358	0.0132	0.0040	0
2750	0.2704	0.2460	0.2234	0.1654	0.0850	0.0366	0.0138	0.0046	0
3000	0.2694	0.2476	0.2264	0.1664	0.0878	0.0380	0.0144	0.0034	0
3250	0.2822	0.2606	0.2336	0.1724	0.0932	0.0384	0.0154	0.0052	0
3500	0.2866	0.2610	0.2342	0.1722	0.0974	0.0442	0.0166	0.0062	0
3750	0.2912	0.2696	0.2432	0.1814	0.1006	0.0454	0.0162	0.0038	0
4000	0.3016	0.2792	0.2542	0.1888	0.1054	0.0482	0.0158	0.0052	0
4250	0.3066	0.2786	0.2536	0.1908	0.1104	0.0534	0.0196	0.0064	0
4500	0.3160	0.2886	0.2646	0.1976	0.1068	0.0528	0.0204	0.0064	0
4750	0.3040	0.2814	0.2600	0.1932	0.1088	0.0504	0.0200	0.0064	0
5000	0.3344	0.3076	0.2862	0.2148	0.1214	0.0570	0.0220	0.0058	0

Table A2.70 KI2, Annual, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0170	0.0236	0.0196	0.0158	0.0068	0.0022	0.0002	0.0000	0
500	0.0188	0.0206	0.0160	0.0110	0.0044	-0.0012	-0.0008	-0.0012	0
750	0.0294	0.0308	0.0300	0.0232	0.0096	0.0042	-0.0002	0.0014	0
1000	0.0316	0.0342	0.0286	0.0216	0.0120	0.0024	0.0022	0.0000	0
1250	0.0320	0.0362	0.0330	0.0216	0.0166	0.0032	-0.0004	-0.0004	0
1500	0.0494	0.0520	0.0484	0.0306	0.0132	0.0038	0.0022	0.0010	0
1750	0.0482	0.0494	0.0460	0.0348	0.0196	0.0072	0.0028	0.0006	0
2000	0.0468	0.0452	0.0416	0.0346	0.0214	0.0084	0.0028	0.0012	0
2250	0.0544	0.0556	0.0508	0.0388	0.0252	0.0110	0.0042	0.0012	0
2500	0.0640	0.0646	0.0566	0.0430	0.0274	0.0108	0.0044	0.0018	0
2750	0.0768	0.0750	0.0684	0.0550	0.0286	0.0116	0.0050	0.0024	0
3000	0.0758	0.0766	0.0714	0.0560	0.0314	0.0130	0.0056	0.0012	0
3250	0.0886	0.0896	0.0786	0.0620	0.0368	0.0134	0.0066	0.0030	0
3500	0.0930	0.0900	0.0792	0.0618	0.0410	0.0192	0.0078	0.0040	0
3750	0.0976	0.0986	0.0882	0.0710	0.0442	0.0204	0.0074	0.0016	0
4000	0.1080	0.1082	0.0992	0.0784	0.0490	0.0232	0.0070	0.0030	0
4250	0.1130	0.1076	0.0986	0.0804	0.0540	0.0284	0.0108	0.0042	0
4500	0.1224	0.1176	0.1096	0.0872	0.0504	0.0278	0.0116	0.0042	0
4750	0.1104	0.1104	0.1050	0.0828	0.0524	0.0254	0.0112	0.0042	0
5000	0.1408	0.1366	0.1312	0.1044	0.0650	0.0320	0.0132	0.0036	0

Table A2.71 KI2, Annual, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4720	0.4450	0.3594	0.2328	0.1282	0.0618	0.0242	0
250	0.5172	0.4948	0.4676	0.3798	0.2484	0.1452	0.0684	0.0268	0
500	0.5154	0.4880	0.4600	0.3812	0.2524	0.1374	0.0652	0.0230	0
750	0.5248	0.4976	0.4756	0.3914	0.2614	0.1536	0.0710	0.0276	0
1000	0.5398	0.5128	0.4852	0.4012	0.2648	0.1498	0.0738	0.0264	0
1250	0.5542	0.5232	0.4994	0.4122	0.2678	0.1534	0.0786	0.0272	0
1500	0.5412	0.5166	0.4928	0.4162	0.2870	0.1642	0.0756	0.0284	0
1750	0.5510	0.5236	0.4992	0.4192	0.2844	0.1644	0.0828	0.0310	0
2000	0.5678	0.5400	0.5126	0.4294	0.2848	0.1618	0.0832	0.0310	0
2250	0.5630	0.5356	0.5088	0.4232	0.2832	0.1700	0.0868	0.0350	0
2500	0.5674	0.5424	0.5158	0.4356	0.2996	0.1742	0.0886	0.0342	0
2750	0.5844	0.5556	0.5312	0.4526	0.3086	0.1890	0.0922	0.0360	0
3000	0.5872	0.5584	0.5316	0.4544	0.3122	0.1884	0.0958	0.0368	0
3250	0.5954	0.5708	0.5436	0.4616	0.3260	0.1950	0.0992	0.0372	0
3500	0.6002	0.5728	0.5498	0.4704	0.3232	0.1974	0.1052	0.0430	0
3750	0.6070	0.5824	0.5572	0.4766	0.3418	0.2048	0.1072	0.0446	0
4000	0.6154	0.5942	0.5676	0.4866	0.3446	0.2138	0.1132	0.0470	0
4250	0.6306	0.6018	0.5758	0.4920	0.3460	0.2148	0.1162	0.0512	0
4500	0.6466	0.6262	0.5956	0.5132	0.3634	0.2280	0.1142	0.0516	0
4750	0.6152	0.5934	0.5660	0.4840	0.3536	0.2172	0.1174	0.0496	0
5000	0.6534	0.6312	0.6068	0.5248	0.3754	0.2474	0.1310	0.0556	0

Table A2.72 KI2, Annual, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0172	0.0228	0.0226	0.0204	0.0156	0.0170	0.0066	0.0026	0
500	0.0154	0.0160	0.0150	0.0218	0.0196	0.0092	0.0034	-0.0012	0
750	0.0248	0.0256	0.0306	0.0320	0.0286	0.0254	0.0092	0.0034	0
1000	0.0398	0.0408	0.0402	0.0418	0.0320	0.0216	0.0120	0.0022	0
1250	0.0542	0.0512	0.0544	0.0528	0.0350	0.0252	0.0168	0.0030	0
1500	0.0412	0.0446	0.0478	0.0568	0.0542	0.0360	0.0138	0.0042	0
1750	0.0510	0.0516	0.0542	0.0598	0.0516	0.0362	0.0210	0.0068	0
2000	0.0678	0.0680	0.0676	0.0700	0.0520	0.0336	0.0214	0.0068	0
2250	0.0630	0.0636	0.0638	0.0638	0.0504	0.0418	0.0250	0.0108	0
2500	0.0674	0.0704	0.0708	0.0762	0.0668	0.0460	0.0268	0.0100	0
2750	0.0844	0.0836	0.0862	0.0932	0.0758	0.0608	0.0304	0.0118	0
3000	0.0872	0.0864	0.0866	0.0950	0.0794	0.0602	0.0340	0.0126	0
3250	0.0954	0.0988	0.0986	0.1022	0.0932	0.0668	0.0374	0.0130	0
3500	0.1002	0.1008	0.1048	0.1110	0.0904	0.0692	0.0434	0.0188	0
3750	0.1070	0.1104	0.1122	0.1172	0.1090	0.0766	0.0454	0.0204	0
4000	0.1154	0.1222	0.1226	0.1272	0.1118	0.0856	0.0514	0.0228	0
4250	0.1306	0.1298	0.1308	0.1326	0.1132	0.0866	0.0544	0.0270	0
4500	0.1466	0.1542	0.1506	0.1538	0.1306	0.0998	0.0524	0.0274	0
4750	0.1152	0.1214	0.1210	0.1246	0.1208	0.0890	0.0556	0.0254	0
5000	0.1534	0.1592	0.1618	0.1654	0.1426	0.1192	0.0692	0.0314	0

Table A2.73 KI2, Autumn, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.013754714	0.9829631000	1.041609484
250	1.013868813	0.9841902861	1.041661410
500	1.013995889	0.9829742889	1.040765702
750	1.013852603	0.9820203999	1.040729567
1000	1.013123040	0.9829398729	1.040829050
1250	1.013202451	0.9811163339	1.040678521
1500	1.012574984	0.9818832275	1.040026560
1750	1.012177115	0.9816006569	1.041199698
2000	1.012328724	0.9807553649	1.040438245
2250	1.011515410	0.9802938922	1.039653333
2500	1.011460283	0.9811211399	1.038880926
2750	1.010799126	0.9782041031	1.039123827
3000	1.010264143	0.9797723768	1.038360596
3250	1.010405522	0.9794561147	1.038883065
3500	1.010505160	0.9795590545	1.037550697
3750	1.009892307	0.9800010444	1.037766985
4000	1.010100193	0.9793061272	1.037012692
4250	1.008890260	0.9793291206	1.036807312
4500	1.008989659	0.9779205929	1.037120508
4750	1.009067911	0.9770741498	1.036437856
5000	1.008300237	0.9769667574	1.036383819

Table A2.74 KI2, Autumn, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.00000000000000	0.00000000000000	0.00000000000000
250	0.00011409922697	0.00122718613454	0.00005192602911
500	0.00024117470486	0.00001118887777	-0.00084378118719
750	0.00009788847392	-0.00094270003402	-0.00087991644305
1000	-0.00063167408408	-0.00002322712201	-0.00078043374967
1250	-0.00055226361568	-0.00184676612385	-0.00093096243402
1500	-0.00117972989754	-0.00107987243397	-0.00158292348568
1750	-0.00157759876980	-0.00136244305014	-0.00040978598746
2000	-0.00142598985034	-0.00220773512948	-0.00117123872659
2250	-0.00223930469573	-0.00266920776026	-0.00195615060118
2500	-0.00229443097105	-0.00184196005134	-0.00272855806925
2750	-0.00295558859498	-0.00475899684557	-0.00248565626278
3000	-0.00349057105761	-0.00319072315101	-0.00324888765648
3250	-0.00334919196630	-0.00350698523423	-0.00272641886387
3500	-0.00324955473587	-0.00340404545127	-0.00405878712668
3750	-0.00386240735145	-0.00296205557986	-0.00384249859463
4000	-0.00365452140653	-0.00365697281010	-0.00459679122737
4250	-0.00486445431115	-0.00363397940270	-0.00480217206246
4500	-0.00476505497614	-0.00504250711948	-0.00448897520862
4750	-0.00468680316199	-0.00588895014388	-0.00517162726013
5000	-0.00545447745018	-0.00599634260952	-0.00522566505589

Table A2.75 KI2, Autumn, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	886346.5	951156.0	1008924.5	1085627.0	1156096.0
250	887634.0	947584.0	1015682.0	1089760.5	1157273.0
500	884510.0	941563.0	1007742.5	1080805.0	1155955.0
750	885704.5	942316.0	1004829.0	1081032.5	1149045.0
1000	877062.5	940810.5	997992.0	1068289.5	1130306.5
1250	880014.0	936690.0	996760.0	1063927.5	1130574.0
1500	879799.0	927561.5	990557.0	1051485.5	1115101.5
1750	877711.5	932285.5	991148.5	1042777.0	1108055.5
2000	880656.5	928514.0	984909.5	1050329.5	1109721.5
2250	874569.0	927545.5	976303.5	1025476.0	1086846.5
2500	873593.0	918239.0	968190.5	1033950.5	1086913.5
2750	876931.5	919516.5	970664.0	1021584.5	1080671.5
3000	876216.0	915255.0	967152.0	1013799.5	1059434.5
3250	869840.0	914816.0	960552.5	1006536.5	1057540.5
3500	869464.0	910462.5	958888.0	1005727.5	1057216.0
3750	868332.0	915576.5	957919.0	1001226.5	1048573.5
4000	867225.5	907713.5	952511.0	1001500.0	1051530.5
4250	871539.0	908436.0	946138.0	985587.5	1028709.0
4500	864342.5	901586.5	937000.0	979481.0	1022009.5
4750	865439.5	898494.5	935719.5	973647.0	1020131.5
5000	864124.5	898009.0	933472.0	968499.5	1011722.0

Table A2.76 KI2, Autumn, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.7692	0.7444	0.7194	0.6326	0.4898	0.3390	0.2216	0.1410	0.0068
250	0.7602	0.7334	0.7036	0.6256	0.4718	0.3322	0.2238	0.1444	0.0044
500	0.7582	0.7318	0.7074	0.6246	0.4808	0.3440	0.2290	0.1472	0.0054
750	0.7692	0.7448	0.7186	0.6374	0.4914	0.3502	0.2386	0.1484	0.0062
1000	0.7760	0.7530	0.7256	0.6458	0.5018	0.3620	0.2554	0.1626	0.0078
1250	0.7798	0.7570	0.7300	0.6452	0.5008	0.3618	0.2464	0.1638	0.0086
1500	0.7878	0.7660	0.7404	0.6598	0.5170	0.3762	0.2608	0.1724	0.0074
1750	0.7880	0.7654	0.7402	0.6562	0.5244	0.3716	0.2594	0.1646	0.0084
2000	0.7832	0.7600	0.7370	0.6556	0.5114	0.3668	0.2500	0.1708	0.0098
2250	0.7928	0.7694	0.7466	0.6698	0.5354	0.3994	0.2686	0.1774	0.0090
2500	0.8010	0.7772	0.7536	0.6746	0.5388	0.3930	0.2786	0.1890	0.0072
2750	0.7992	0.7774	0.7508	0.6728	0.5320	0.3938	0.2726	0.1848	0.0082
3000	0.8064	0.7842	0.7578	0.6782	0.5400	0.3984	0.2784	0.1864	0.0100
3250	0.8060	0.7858	0.7640	0.6884	0.5488	0.4046	0.2816	0.1950	0.0096
3500	0.8070	0.7862	0.7662	0.6920	0.5538	0.4172	0.2886	0.1904	0.0104
3750	0.8166	0.7976	0.7692	0.6942	0.5522	0.4118	0.2890	0.1940	0.0104
4000	0.8182	0.7928	0.7680	0.6946	0.5606	0.4238	0.3042	0.2070	0.0092
4250	0.8274	0.8040	0.7804	0.7016	0.5682	0.4266	0.3096	0.2112	0.0098
4500	0.8286	0.8068	0.7870	0.7196	0.5804	0.4348	0.3118	0.2174	0.0150
4750	0.8220	0.8004	0.7810	0.7180	0.5912	0.4474	0.3280	0.2252	0.0124
5000	0.8310	0.8088	0.7860	0.7158	0.5894	0.4516	0.3264	0.2254	0.0168

Table A2.77 KI2, Autumn, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0090	-0.0110	-0.0158	-0.0070	-0.0180	-0.0068	0.0022	0.0034	-0.0024
500	-0.0110	-0.0126	-0.0120	-0.0080	-0.0090	0.0050	0.0074	0.0062	-0.0014
750	0.0000	0.0004	-0.0008	0.0048	0.0016	0.0112	0.0170	0.0074	-0.0006
1000	0.0068	0.0086	0.0062	0.0132	0.0120	0.0230	0.0338	0.0216	0.0010
1250	0.0106	0.0126	0.0106	0.0126	0.0110	0.0228	0.0248	0.0228	0.0018
1500	0.0186	0.0216	0.0210	0.0272	0.0272	0.0372	0.0392	0.0314	0.0006
1750	0.0188	0.0210	0.0208	0.0236	0.0346	0.0326	0.0378	0.0236	0.0016
2000	0.0140	0.0156	0.0176	0.0230	0.0216	0.0278	0.0284	0.0298	0.0030
2250	0.0236	0.0250	0.0272	0.0372	0.0456	0.0604	0.0470	0.0364	0.0022
2500	0.0318	0.0328	0.0342	0.0420	0.0490	0.0540	0.0570	0.0480	0.0004
2750	0.0300	0.0330	0.0314	0.0402	0.0422	0.0548	0.0510	0.0438	0.0014
3000	0.0372	0.0398	0.0384	0.0456	0.0502	0.0594	0.0568	0.0454	0.0032
3250	0.0368	0.0414	0.0446	0.0558	0.0590	0.0656	0.0600	0.0540	0.0028
3500	0.0378	0.0418	0.0468	0.0594	0.0640	0.0782	0.0670	0.0494	0.0036
3750	0.0474	0.0532	0.0498	0.0616	0.0624	0.0728	0.0674	0.0530	0.0036
4000	0.0490	0.0484	0.0486	0.0620	0.0708	0.0848	0.0826	0.0660	0.0024
4250	0.0582	0.0596	0.0610	0.0690	0.0784	0.0876	0.0880	0.0702	0.0030
4500	0.0594	0.0624	0.0676	0.0870	0.0906	0.0958	0.0902	0.0764	0.0082
4750	0.0528	0.0560	0.0616	0.0854	0.1014	0.1084	0.1064	0.0842	0.0056
5000	0.0618	0.0644	0.0666	0.0832	0.0996	0.1126	0.1048	0.0844	0.0100

Table A2.78 KI2, Autumn, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.1610	0.1542	0.1462	0.1268	0.0942	0.0710	0.0458	0.0328	0.0012
250	0.1530	0.1444	0.1358	0.1166	0.0868	0.0658	0.0458	0.0320	0.0012
500	0.1600	0.1516	0.1458	0.1266	0.0942	0.0672	0.0498	0.0344	0.0022
750	0.1640	0.1584	0.1520	0.1324	0.1018	0.0750	0.0530	0.0356	0.0024
1000	0.1806	0.1724	0.1634	0.1420	0.1104	0.0808	0.0552	0.0360	0.0030
1250	0.1778	0.1714	0.1660	0.1446	0.1084	0.0834	0.0620	0.0456	0.0030
1500	0.1830	0.1762	0.1700	0.1474	0.1142	0.0846	0.0594	0.0416	0.0030
1750	0.1924	0.1830	0.1754	0.1536	0.1186	0.0882	0.0634	0.0434	0.0028
2000	0.1908	0.1844	0.1772	0.1566	0.1216	0.0918	0.0676	0.0490	0.0032
2250	0.2052	0.1940	0.1864	0.1636	0.1270	0.0922	0.0674	0.0452	0.0036
2500	0.2082	0.2002	0.1916	0.1670	0.1350	0.1024	0.0716	0.0514	0.0030
2750	0.2112	0.2048	0.1952	0.1732	0.1384	0.1062	0.0784	0.0558	0.0026
3000	0.2254	0.2174	0.2074	0.1822	0.1424	0.1132	0.0828	0.0582	0.0036
3250	0.2276	0.2182	0.2086	0.1836	0.1462	0.1144	0.0868	0.0614	0.0034
3500	0.2284	0.2200	0.2110	0.1838	0.1456	0.1136	0.0832	0.0596	0.0050
3750	0.2338	0.2240	0.2160	0.1900	0.1506	0.1136	0.0856	0.0618	0.0042
4000	0.2470	0.2382	0.2290	0.2036	0.1620	0.1200	0.0906	0.0620	0.0038
4250	0.2492	0.2414	0.2340	0.2058	0.1658	0.1246	0.0902	0.0662	0.0028
4500	0.2616	0.2540	0.2446	0.2194	0.1762	0.1386	0.1040	0.0756	0.0062
4750	0.2688	0.2594	0.2498	0.2226	0.1796	0.1426	0.1084	0.0744	0.0050
5000	0.2784	0.2686	0.2556	0.2258	0.1868	0.1500	0.1120	0.0792	0.0080

Table A2.79 KI2, Autumn, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0080	-0.0098	-0.0104	-0.0102	-0.0074	-0.0052	0.0000	-0.0008	0.0000
500	-0.0010	-0.0026	-0.0004	-0.0002	0.0000	-0.0038	0.0040	0.0016	0.0010
750	0.0030	0.0042	0.0058	0.0056	0.0076	0.0040	0.0072	0.0028	0.0012
1000	0.0196	0.0182	0.0172	0.0152	0.0162	0.0098	0.0094	0.0032	0.0018
1250	0.0168	0.0172	0.0198	0.0178	0.0142	0.0124	0.0162	0.0128	0.0018
1500	0.0220	0.0220	0.0238	0.0206	0.0200	0.0136	0.0136	0.0088	0.0018
1750	0.0314	0.0288	0.0292	0.0268	0.0244	0.0172	0.0176	0.0106	0.0016
2000	0.0298	0.0302	0.0310	0.0298	0.0274	0.0208	0.0218	0.0162	0.0020
2250	0.0442	0.0398	0.0402	0.0368	0.0328	0.0212	0.0216	0.0124	0.0024
2500	0.0472	0.0460	0.0454	0.0402	0.0408	0.0314	0.0258	0.0186	0.0018
2750	0.0502	0.0506	0.0490	0.0464	0.0442	0.0352	0.0326	0.0230	0.0014
3000	0.0644	0.0632	0.0612	0.0554	0.0482	0.0422	0.0370	0.0254	0.0024
3250	0.0666	0.0640	0.0624	0.0568	0.0520	0.0434	0.0410	0.0286	0.0022
3500	0.0674	0.0658	0.0648	0.0570	0.0514	0.0426	0.0374	0.0268	0.0038
3750	0.0728	0.0698	0.0698	0.0632	0.0564	0.0426	0.0398	0.0290	0.0030
4000	0.0860	0.0840	0.0828	0.0768	0.0678	0.0490	0.0448	0.0292	0.0026
4250	0.0882	0.0872	0.0878	0.0790	0.0716	0.0536	0.0444	0.0334	0.0016
4500	0.1006	0.0998	0.0984	0.0926	0.0820	0.0676	0.0582	0.0428	0.0050
4750	0.1078	0.1052	0.1036	0.0958	0.0854	0.0716	0.0626	0.0416	0.0038
5000	0.1174	0.1144	0.1094	0.0990	0.0926	0.0790	0.0662	0.0464	0.0068

Table A2.80 KI2, Autumn, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4908	0.4776	0.4352	0.3672	0.3082	0.2472	0.1928	0.0212
250	0.4978	0.4842	0.4716	0.4320	0.3744	0.3040	0.2414	0.1826	0.0186
500	0.5000	0.4882	0.4754	0.4322	0.3702	0.3110	0.2548	0.1952	0.0208
750	0.5092	0.4948	0.4854	0.4444	0.3760	0.3080	0.2506	0.1968	0.0238
1000	0.5264	0.5160	0.5036	0.4666	0.3998	0.3328	0.2684	0.2148	0.0236
1250	0.5342	0.5186	0.5040	0.4688	0.3994	0.3358	0.2676	0.2070	0.0280
1500	0.5474	0.5322	0.5188	0.4800	0.4158	0.3504	0.2858	0.2230	0.0290
1750	0.5500	0.5400	0.5282	0.4886	0.4234	0.3604	0.2938	0.2310	0.0276
2000	0.5468	0.5366	0.5272	0.4864	0.4220	0.3520	0.2854	0.2220	0.0294
2250	0.5774	0.5648	0.5508	0.5140	0.4426	0.3750	0.3100	0.2458	0.0310
2500	0.5730	0.5622	0.5480	0.5138	0.4524	0.3830	0.3146	0.2452	0.0336
2750	0.5842	0.5694	0.5568	0.5210	0.4560	0.3852	0.3190	0.2506	0.0384
3000	0.6028	0.5932	0.5792	0.5420	0.4738	0.4044	0.3330	0.2656	0.0340
3250	0.6044	0.5916	0.5786	0.5444	0.4810	0.4088	0.3390	0.2700	0.0372
3500	0.6104	0.5952	0.5822	0.5468	0.4810	0.4060	0.3414	0.2734	0.0400
3750	0.6220	0.6102	0.5958	0.5572	0.4930	0.4168	0.3468	0.2760	0.0422
4000	0.6216	0.6104	0.5986	0.5582	0.4868	0.4242	0.3590	0.2890	0.0428
4250	0.6288	0.6184	0.6060	0.5736	0.5144	0.4440	0.3684	0.2956	0.0426
4500	0.6534	0.6400	0.6272	0.5876	0.5202	0.4454	0.3746	0.3034	0.0508
4750	0.6580	0.6452	0.6340	0.5958	0.5240	0.4538	0.3834	0.3144	0.0476
5000	0.6656	0.6542	0.6426	0.6028	0.5402	0.4642	0.3956	0.3252	0.0542

Table A2.81 KI2, Autumn, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0022	-0.0066	-0.0060	-0.0032	0.0072	-0.0042	-0.0058	-0.0102	-0.0026
500	0.0000	-0.0026	-0.0022	-0.0030	0.0030	0.0028	0.0076	0.0024	-0.0004
750	0.0092	0.0040	0.0078	0.0092	0.0088	-0.0002	0.0034	0.0040	0.0026
1000	0.0264	0.0252	0.0260	0.0314	0.0326	0.0246	0.0212	0.0220	0.0024
1250	0.0342	0.0278	0.0264	0.0336	0.0322	0.0276	0.0204	0.0142	0.0068
1500	0.0474	0.0414	0.0412	0.0448	0.0486	0.0422	0.0386	0.0302	0.0078
1750	0.0500	0.0492	0.0506	0.0534	0.0562	0.0522	0.0466	0.0382	0.0064
2000	0.0468	0.0458	0.0496	0.0512	0.0548	0.0438	0.0382	0.0292	0.0082
2250	0.0774	0.0740	0.0732	0.0788	0.0754	0.0668	0.0628	0.0530	0.0098
2500	0.0730	0.0714	0.0704	0.0786	0.0852	0.0748	0.0674	0.0524	0.0124
2750	0.0842	0.0786	0.0792	0.0858	0.0888	0.0770	0.0718	0.0578	0.0172
3000	0.1028	0.1024	0.1016	0.1068	0.1066	0.0962	0.0858	0.0728	0.0128
3250	0.1044	0.1008	0.1010	0.1092	0.1138	0.1006	0.0918	0.0772	0.0160
3500	0.1104	0.1044	0.1046	0.1116	0.1138	0.0978	0.0942	0.0806	0.0188
3750	0.1220	0.1194	0.1182	0.1220	0.1258	0.1086	0.0996	0.0832	0.0210
4000	0.1216	0.1196	0.1210	0.1230	0.1196	0.1160	0.1118	0.0962	0.0216
4250	0.1288	0.1276	0.1284	0.1384	0.1472	0.1358	0.1212	0.1028	0.0214
4500	0.1534	0.1492	0.1496	0.1524	0.1530	0.1372	0.1274	0.1106	0.0296
4750	0.1580	0.1544	0.1564	0.1606	0.1568	0.1456	0.1362	0.1216	0.0264
5000	0.1656	0.1634	0.1650	0.1676	0.1730	0.1560	0.1484	0.1324	0.0330

Table A2.82 KI2, Autumn, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.003767657	0.9856440509	1.023412089
250	1.004145277	0.9854430265	1.023268224
500	1.003863707	0.9854918144	1.023200973
750	1.003782076	0.9853984683	1.021978281
1000	1.003907120	0.9857763335	1.022733611
1250	1.003583325	0.9856568132	1.022858513
1500	1.003440077	0.9852739896	1.022292916
1750	1.003310163	0.9860595378	1.022349741
2000	1.003302688	0.9846877535	1.022823387
2250	1.002972071	0.9850859382	1.022907647
2500	1.003050428	0.9844328744	1.022242241
2750	1.003080065	0.9844104980	1.022283734
3000	1.003010440	0.9848436470	1.021807864
3250	1.003074467	0.9853871440	1.021527790
3500	1.002960102	0.9846541945	1.021527568
3750	1.002711797	0.9847637142	1.021977959
4000	1.002970594	0.9845858614	1.021645659
4250	1.002445702	0.9847196467	1.021911730
4500	1.002125634	0.9845878995	1.021879284
4750	1.002221384	0.9851785459	1.020425495
5000	1.002231727	0.9844777572	1.021864767

Table A2.83 KI2, Autumn, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.00000000000000	0.00000000000000	0.0000000000000
250	0.00037761922542	-0.00020102443041	-0.0001438651742
500	0.00009604941646	-0.00015223654125	-0.0002111158756
750	0.00001441857955	-0.00024558258116	-0.0014338086055
1000	0.00013946262447	0.00013228260592	-0.0006784787981
1250	-0.00018433215722	0.00001276224455	-0.0005535762585
1500	-0.00032758023763	-0.00037006128641	-0.0011191729697
1750	-0.00045749431461	0.00041548684287	-0.0010623482608
2000	-0.00046496898824	-0.00095629743638	-0.0005887020256
2250	-0.00079558641974	-0.00055811273927	-0.0005044419971
2500	-0.00071722976363	-0.00121117647135	-0.0011698478348
2750	-0.00068759273872	-0.00123355294915	-0.0011283549232
3000	-0.00075721769184	-0.00080040393322	-0.0016042253675
3250	-0.00069319022917	-0.00025690695954	-0.0018842991683
3500	-0.00080755552760	-0.00098985636800	-0.0018845209304
3750	-0.00105586077678	-0.00088033673075	-0.0014341300354
4000	-0.00079706379836	-0.00105818950793	-0.0017664302926
4250	-0.00132195523598	-0.00092440420034	-0.0015003595011
4500	-0.00164202317789	-0.00105615138288	-0.0015328050233
4750	-0.00154627365033	-0.00046550504764	-0.0029865940952
5000	-0.00153593055018	-0.00116629375611	-0.0015473221934

Table A2.84 KI2, Autumn, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	864582.0	894641.5	915034.5	929174.5	935646.5
250	859919.5	893259.5	910521.5	924113.5	933278.0
500	865294.0	896261.5	914077.5	928983.0	933810.5
750	865272.0	895188.0	909680.5	924562.5	930973.5
1000	860030.0	889993.0	910192.0	921912.5	932471.5
1250	861418.5	891526.0	910755.5	924240.5	924539.0
1500	861159.5	890155.0	903563.5	912970.0	920194.0
1750	856401.5	887805.5	906171.5	913623.5	922072.5
2000	859824.5	886992.5	903418.5	910192.5	917945.5
2250	857960.5	882318.5	896195.0	910710.0	910234.0
2500	852674.0	882444.0	899264.5	905524.0	911256.0
2750	854254.0	879279.5	894534.0	903728.5	911056.0
3000	854962.5	879936.5	891908.5	903025.5	910346.5
3250	854736.5	874122.0	893787.0	903197.5	907563.5
3500	853419.0	875963.0	891201.5	900015.5	905273.5
3750	853675.5	874989.5	889715.0	898223.5	902091.5
4000	849840.0	872546.0	883897.0	893809.0	897282.0
4250	848599.5	870951.5	882896.0	888549.5	895412.0
4500	850144.0	871822.5	879929.5	885465.0	888302.5
4750	846578.0	869286.5	880242.0	886592.0	889303.5
5000	849908.5	868125.5	881691.0	889680.5	891060.5

Table A2.85 KI2, Autumn, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9126	0.8878	0.8552	0.7474	0.4968	0.2412	0.0962	0.0242	0
250	0.9208	0.8980	0.8706	0.7480	0.4948	0.2644	0.1096	0.0328	0
500	0.9112	0.8864	0.8608	0.7536	0.4948	0.2594	0.1020	0.0284	0
750	0.9170	0.8954	0.8712	0.7528	0.5004	0.2582	0.0974	0.0254	0
1000	0.9194	0.8974	0.8698	0.7666	0.5186	0.2746	0.1016	0.0312	0
1250	0.9150	0.8954	0.8710	0.7662	0.5110	0.2670	0.1082	0.0310	0
1500	0.9108	0.8920	0.8670	0.7676	0.5290	0.2818	0.1138	0.0342	0
1750	0.9236	0.9050	0.8778	0.7824	0.5260	0.2886	0.1112	0.0358	0
2000	0.9320	0.9112	0.8850	0.7872	0.5390	0.2910	0.1204	0.0432	0
2250	0.9318	0.9128	0.8928	0.7990	0.5472	0.2870	0.1178	0.0356	0
2500	0.9304	0.9078	0.8862	0.7934	0.5540	0.3010	0.1304	0.0428	0
2750	0.9374	0.9194	0.8960	0.8010	0.5618	0.3130	0.1332	0.0376	0
3000	0.9376	0.9190	0.8978	0.8096	0.5682	0.3086	0.1408	0.0366	0
3250	0.9368	0.9208	0.9008	0.8018	0.5816	0.3250	0.1388	0.0412	0
3500	0.9404	0.9234	0.9020	0.8158	0.5798	0.3330	0.1502	0.0514	0
3750	0.9376	0.9234	0.9020	0.8142	0.5906	0.3478	0.1486	0.0510	0
4000	0.9480	0.9328	0.9112	0.8248	0.6022	0.3328	0.1456	0.0462	0
4250	0.9420	0.9276	0.9092	0.8232	0.6028	0.3556	0.1598	0.0512	0
4500	0.9498	0.9356	0.9228	0.8438	0.6180	0.3688	0.1650	0.0600	0
4750	0.9498	0.9332	0.9146	0.8328	0.6152	0.3730	0.1744	0.0602	0
5000	0.9492	0.9352	0.9186	0.8454	0.6224	0.3664	0.1658	0.0566	0

Table A2.86 KI2, Autumn, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0082	0.0102	0.0154	0.0006	-0.0020	0.0232	0.0134	0.0086	0
500	-0.0014	-0.0014	0.0056	0.0062	-0.0020	0.0182	0.0058	0.0042	0
750	0.0044	0.0076	0.0160	0.0054	0.0036	0.0170	0.0012	0.0012	0
1000	0.0068	0.0096	0.0146	0.0192	0.0218	0.0334	0.0054	0.0070	0
1250	0.0024	0.0076	0.0158	0.0188	0.0142	0.0258	0.0120	0.0068	0
1500	-0.0018	0.0042	0.0118	0.0202	0.0322	0.0406	0.0176	0.0100	0
1750	0.0110	0.0172	0.0226	0.0350	0.0292	0.0474	0.0150	0.0116	0
2000	0.0194	0.0234	0.0298	0.0398	0.0422	0.0498	0.0242	0.0190	0
2250	0.0192	0.0250	0.0376	0.0516	0.0504	0.0458	0.0216	0.0114	0
2500	0.0178	0.0200	0.0310	0.0460	0.0572	0.0598	0.0342	0.0186	0
2750	0.0248	0.0316	0.0408	0.0536	0.0650	0.0718	0.0370	0.0134	0
3000	0.0250	0.0312	0.0426	0.0622	0.0714	0.0674	0.0446	0.0124	0
3250	0.0242	0.0330	0.0456	0.0544	0.0848	0.0838	0.0426	0.0170	0
3500	0.0278	0.0356	0.0468	0.0684	0.0830	0.0918	0.0540	0.0272	0
3750	0.0250	0.0356	0.0468	0.0668	0.0938	0.1066	0.0524	0.0268	0
4000	0.0354	0.0450	0.0560	0.0774	0.1054	0.0916	0.0494	0.0220	0
4250	0.0294	0.0398	0.0540	0.0758	0.1060	0.1144	0.0636	0.0270	0
4500	0.0372	0.0478	0.0676	0.0964	0.1212	0.1276	0.0688	0.0358	0
4750	0.0372	0.0454	0.0594	0.0854	0.1184	0.1318	0.0782	0.0360	0
5000	0.0366	0.0474	0.0634	0.0980	0.1256	0.1252	0.0696	0.0324	0

Table A2.87 KI2, Autumn, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.2090	0.1864	0.1684	0.1182	0.0594	0.0236	0.0074	0.0012	0
250	0.2132	0.1940	0.1772	0.1270	0.0616	0.0270	0.0070	0.0022	0
500	0.2074	0.1874	0.1656	0.1164	0.0550	0.0240	0.0078	0.0016	0
750	0.2070	0.1858	0.1646	0.1152	0.0592	0.0246	0.0082	0.0022	0
1000	0.2170	0.1996	0.1802	0.1280	0.0668	0.0280	0.0106	0.0028	0
1250	0.2248	0.2058	0.1844	0.1258	0.0650	0.0286	0.0112	0.0024	0
1500	0.2334	0.2144	0.1940	0.1420	0.0720	0.0314	0.0102	0.0030	0
1750	0.2356	0.2150	0.1954	0.1368	0.0736	0.0302	0.0102	0.0028	0
2000	0.2414	0.2188	0.1994	0.1428	0.0780	0.0356	0.0140	0.0050	0
2250	0.2598	0.2358	0.2138	0.1566	0.0788	0.0346	0.0116	0.0044	0
2500	0.2592	0.2382	0.2156	0.1560	0.0836	0.0374	0.0146	0.0038	0
2750	0.2584	0.2376	0.2174	0.1574	0.0830	0.0390	0.0144	0.0046	0
3000	0.2728	0.2518	0.2312	0.1722	0.0908	0.0424	0.0174	0.0044	0
3250	0.2668	0.2424	0.2230	0.1656	0.0868	0.0408	0.0134	0.0030	0
3500	0.2744	0.2530	0.2276	0.1676	0.0936	0.0452	0.0202	0.0052	0
3750	0.2904	0.2662	0.2434	0.1848	0.0984	0.0436	0.0134	0.0040	0
4000	0.2870	0.2646	0.2424	0.1802	0.0940	0.0434	0.0158	0.0036	0
4250	0.3048	0.2814	0.2614	0.1992	0.1146	0.0548	0.0188	0.0046	0
4500	0.3212	0.2968	0.2720	0.2022	0.1080	0.0518	0.0228	0.0062	0
4750	0.3158	0.2928	0.2680	0.1964	0.1074	0.0480	0.0144	0.0050	0
5000	0.3116	0.2868	0.2644	0.2058	0.1124	0.0540	0.0204	0.0052	0

Table A2.88 KI2, Autumn, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0042	0.0076	0.0088	0.0088	0.0022	0.0034	-0.0004	0.0010	0
500	-0.0016	0.0010	-0.0028	-0.0018	-0.0044	0.0004	0.0004	0.0004	0
750	-0.0020	-0.0006	-0.0038	-0.0030	-0.0002	0.0010	0.0008	0.0010	0
1000	0.0080	0.0132	0.0118	0.0098	0.0074	0.0044	0.0032	0.0016	0
1250	0.0158	0.0194	0.0160	0.0076	0.0056	0.0050	0.0038	0.0012	0
1500	0.0244	0.0280	0.0256	0.0238	0.0126	0.0078	0.0028	0.0018	0
1750	0.0266	0.0286	0.0270	0.0186	0.0142	0.0066	0.0028	0.0016	0
2000	0.0324	0.0324	0.0310	0.0246	0.0186	0.0120	0.0066	0.0038	0
2250	0.0508	0.0494	0.0454	0.0384	0.0194	0.0110	0.0042	0.0032	0
2500	0.0502	0.0518	0.0472	0.0378	0.0242	0.0138	0.0072	0.0026	0
2750	0.0494	0.0512	0.0490	0.0392	0.0236	0.0154	0.0070	0.0034	0
3000	0.0638	0.0654	0.0628	0.0540	0.0314	0.0188	0.0100	0.0032	0
3250	0.0578	0.0560	0.0546	0.0474	0.0274	0.0172	0.0060	0.0018	0
3500	0.0654	0.0666	0.0592	0.0494	0.0342	0.0216	0.0128	0.0040	0
3750	0.0814	0.0798	0.0750	0.0666	0.0390	0.0200	0.0060	0.0028	0
4000	0.0780	0.0782	0.0740	0.0620	0.0346	0.0198	0.0084	0.0024	0
4250	0.0958	0.0950	0.0930	0.0810	0.0552	0.0312	0.0114	0.0034	0
4500	0.1122	0.1104	0.1036	0.0840	0.0486	0.0282	0.0154	0.0050	0
4750	0.1068	0.1064	0.0996	0.0782	0.0480	0.0244	0.0070	0.0038	0
5000	0.1026	0.1004	0.0960	0.0876	0.0530	0.0304	0.0130	0.0040	0

Table A2.89 KI2, Autumn, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4706	0.4460	0.3676	0.2398	0.1296	0.0608	0.0210	0
250	0.5048	0.4812	0.4534	0.3698	0.2406	0.1416	0.0636	0.0262	0
500	0.5038	0.4752	0.4432	0.3684	0.2358	0.1298	0.0560	0.0220	0
750	0.5138	0.4858	0.4550	0.3746	0.2380	0.1272	0.0612	0.0232	0
1000	0.5076	0.4840	0.4584	0.3680	0.2432	0.1438	0.0684	0.0256	0
1250	0.5362	0.5056	0.4782	0.3872	0.2550	0.1384	0.0660	0.0270	0
1500	0.5418	0.5188	0.4902	0.4054	0.2650	0.1546	0.0750	0.0292	0
1750	0.5380	0.5140	0.4852	0.4038	0.2670	0.1516	0.0756	0.0274	0
2000	0.5460	0.5228	0.4968	0.4114	0.2736	0.1596	0.0794	0.0328	0
2250	0.5736	0.5482	0.5188	0.4406	0.2912	0.1732	0.0800	0.0324	0
2500	0.5690	0.5430	0.5188	0.4322	0.2940	0.1726	0.0852	0.0352	0
2750	0.5730	0.5486	0.5184	0.4340	0.2916	0.1724	0.0852	0.0372	0
3000	0.5700	0.5450	0.5190	0.4344	0.3024	0.1894	0.0924	0.0408	0
3250	0.5808	0.5528	0.5276	0.4388	0.3018	0.1818	0.0890	0.0386	0
3500	0.5946	0.5634	0.5344	0.4514	0.3100	0.1820	0.0960	0.0422	0
3750	0.5986	0.5728	0.5432	0.4650	0.3254	0.1994	0.1000	0.0400	0
4000	0.6134	0.5840	0.5580	0.4728	0.3152	0.1968	0.0954	0.0402	0
4250	0.6134	0.5882	0.5612	0.4796	0.3434	0.2164	0.1166	0.0510	0
4500	0.6298	0.6060	0.5812	0.5016	0.3586	0.2212	0.1114	0.0480	0
4750	0.6376	0.6138	0.5806	0.4982	0.3524	0.2152	0.1112	0.0446	0
5000	0.6246	0.6010	0.5744	0.4934	0.3412	0.2224	0.1150	0.0492	0

Table A2.90 KI2, Autumn, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0048	0.0106	0.0074	0.0022	0.0008	0.0120	0.0028	0.0052	0
500	0.0038	0.0046	-0.0028	0.0008	-0.0040	0.0002	-0.0048	0.0010	0
750	0.0138	0.0152	0.0090	0.0070	-0.0018	-0.0024	0.0004	0.0022	0
1000	0.0076	0.0134	0.0124	0.0004	0.0034	0.0142	0.0076	0.0046	0
1250	0.0362	0.0350	0.0322	0.0196	0.0152	0.0088	0.0052	0.0060	0
1500	0.0418	0.0482	0.0442	0.0378	0.0252	0.0250	0.0142	0.0082	0
1750	0.0380	0.0434	0.0392	0.0362	0.0272	0.0220	0.0148	0.0064	0
2000	0.0460	0.0522	0.0508	0.0438	0.0338	0.0300	0.0186	0.0118	0
2250	0.0736	0.0776	0.0728	0.0730	0.0514	0.0436	0.0192	0.0114	0
2500	0.0690	0.0724	0.0728	0.0646	0.0542	0.0430	0.0244	0.0142	0
2750	0.0730	0.0780	0.0724	0.0664	0.0518	0.0428	0.0244	0.0162	0
3000	0.0700	0.0744	0.0730	0.0668	0.0626	0.0598	0.0316	0.0198	0
3250	0.0808	0.0822	0.0816	0.0712	0.0620	0.0522	0.0282	0.0176	0
3500	0.0946	0.0928	0.0884	0.0838	0.0702	0.0524	0.0352	0.0212	0
3750	0.0986	0.1022	0.0972	0.0974	0.0856	0.0698	0.0392	0.0190	0
4000	0.1134	0.1134	0.1120	0.1052	0.0754	0.0672	0.0346	0.0192	0
4250	0.1134	0.1176	0.1152	0.1120	0.1036	0.0868	0.0558	0.0300	0
4500	0.1298	0.1354	0.1352	0.1340	0.1188	0.0916	0.0506	0.0270	0
4750	0.1376	0.1432	0.1346	0.1306	0.1126	0.0856	0.0504	0.0236	0
5000	0.1246	0.1304	0.1284	0.1258	0.1014	0.0928	0.0542	0.0282	0

Table A2.91 KI2, Spring, Density Independent. Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.014618130	0.9835714055	1.042425417
250	1.013750613	0.9831661977	1.040740858
500	1.013719270	0.9826182478	1.041035637
750	1.013485473	0.9816197915	1.041478411
1000	1.012590721	0.9813306593	1.040561330
1250	1.012915481	0.9814888317	1.040387282
1500	1.011683551	0.9816867501	1.039992844
1750	1.010864640	0.9800778019	1.038636269
2000	1.010963639	0.9800016861	1.038792276
2250	1.010895096	0.9806313422	1.038580235
2500	1.010713237	0.9800518585	1.037314369
2750	1.010152781	0.9800290639	1.037078844
3000	1.009075089	0.9789655036	1.037700366
3250	1.008741120	0.9784731874	1.036025582
3500	1.008843028	0.9773995469	1.037362810
3750	1.008592341	0.9785300265	1.036802417
4000	1.007452313	0.9771929751	1.034991151
4250	1.007382739	0.9771050317	1.034830349
4500	1.006462344	0.9759563747	1.034719009
4750	1.006956006	0.9749680475	1.034519900
5000	1.006330171	0.9752392891	1.034153006

Table A2.92 KI2, Spring, Density Independent. Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.0000000000000	0.0000000000000	0.000000000000
250	-0.0008675175771	-0.0004052078461	-0.001684559444
500	-0.0008988603712	-0.0009531577051	-0.001389780624
750	-0.0011326573775	-0.0019516140348	-0.000947006277
1000	-0.0020274099351	-0.0022407461783	-0.001864087604
1250	-0.0017026497222	-0.0020825737935	-0.002038135702
1500	-0.0029345796588	-0.0018846554282	-0.002432573511
1750	-0.0037534904236	-0.0034936036078	-0.003789148262
2000	-0.0036544910978	-0.0035697194220	-0.003633141747
2250	-0.0037230345862	-0.0029400632989	-0.003845182436
2500	-0.0039048936304	-0.0035195470120	-0.005111048764
2750	-0.0044653491369	-0.0035423416077	-0.005346573166
3000	-0.0055430412949	-0.0046059019678	-0.004725051685
3250	-0.0058770101439	-0.0050982181186	-0.006399835243
3500	-0.0057751027875	-0.0061718586155	-0.005062607089
3750	-0.0060257896879	-0.0050413790272	-0.005623000019
4000	-0.0071658171161	-0.0063784304697	-0.007434266239
4250	-0.0072353912731	-0.0064663738138	-0.007595068496
4500	-0.0081557860729	-0.0076150308227	-0.007706408195
4750	-0.0076621242291	-0.0086033579811	-0.007905517114
5000	-0.0082879597899	-0.0083321163860	-0.008272411520

Table A2.93 KI2, Spring, Density Independent. Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	666901.5	715489.0	768208.5	823596.0	883453.0
250	667463.0	709892.0	764905.0	812841.5	869635.5
500	669894.0	716232.5	766993.0	817440.0	874294.0
750	665709.5	711660.5	758765.5	810672.5	864560.0
1000	664926.5	703141.0	750983.5	799093.5	850574.5
1250	663895.0	702510.5	746029.0	793316.0	849907.0
1500	662678.0	698859.0	738068.0	780093.0	825660.5
1750	661310.0	693095.5	729633.5	769404.0	809975.0
2000	660709.0	695821.5	732147.5	770207.0	811454.0
2250	661712.0	695797.0	737911.5	773777.5	808727.0
2500	660727.0	696067.0	729559.0	765090.5	804789.0
2750	659079.5	688325.5	721878.5	757820.5	790121.5
3000	659484.5	687571.5	716240.0	747283.0	781406.5
3250	657084.5	686467.0	715781.5	742641.0	775799.0
3500	655599.5	678551.0	710930.0	746246.0	776333.5
3750	652483.0	683166.0	710273.0	741448.0	770059.5
4000	656275.5	675471.5	700596.5	721671.5	750260.5
4250	650195.5	669342.0	694780.5	716670.0	747036.5
4500	651306.5	665572.5	688034.5	709006.5	731067.5
4750	652471.0	673656.0	692154.0	717873.0	738649.0
5000	650531.0	670973.5	690588.0	717688.5	733967.0

Table A2.94 KI2, Spring, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.7694	0.7450	0.7196	0.6488	0.4968	0.3486	0.2252	0.1444	0.0056
250	0.7684	0.7450	0.7144	0.6360	0.4892	0.3548	0.2366	0.1526	0.0056
500	0.7626	0.7354	0.7122	0.6252	0.4842	0.3410	0.2220	0.1422	0.0048
750	0.7756	0.7488	0.7236	0.6500	0.5026	0.3618	0.2462	0.1556	0.0074
1000	0.7896	0.7634	0.7406	0.6610	0.5146	0.3670	0.2536	0.1660	0.0064
1250	0.7902	0.7640	0.7394	0.6570	0.5160	0.3738	0.2530	0.1714	0.0082
1500	0.7984	0.7724	0.7508	0.6718	0.5260	0.3800	0.2630	0.1790	0.0080
1750	0.8066	0.7864	0.7624	0.6890	0.5454	0.4110	0.2886	0.1922	0.0098
2000	0.8044	0.7836	0.7594	0.6744	0.5406	0.3964	0.2778	0.1822	0.0064
2250	0.8040	0.7824	0.7602	0.6876	0.5518	0.3982	0.2800	0.1916	0.0092
2500	0.7972	0.7742	0.7516	0.6838	0.5484	0.4062	0.2826	0.1912	0.0092
2750	0.8116	0.7924	0.7720	0.6930	0.5630	0.4174	0.2926	0.2010	0.0074
3000	0.8156	0.7934	0.7726	0.6972	0.5598	0.4230	0.2986	0.2032	0.0132
3250	0.8204	0.7980	0.7754	0.7024	0.5696	0.4306	0.3034	0.2052	0.0118
3500	0.8168	0.7978	0.7766	0.7070	0.5782	0.4340	0.3094	0.2162	0.0106
3750	0.8408	0.8184	0.7972	0.7240	0.5846	0.4394	0.3150	0.2194	0.0098
4000	0.8374	0.8184	0.7992	0.7310	0.5992	0.4526	0.3328	0.2330	0.0138
4250	0.8430	0.8268	0.8056	0.7374	0.6128	0.4814	0.3486	0.2466	0.0176
4500	0.8480	0.8308	0.8108	0.7426	0.6198	0.4920	0.3654	0.2554	0.0170
4750	0.8426	0.8260	0.8048	0.7338	0.6098	0.4710	0.3520	0.2526	0.0198
5000	0.8456	0.8270	0.8062	0.7430	0.6066	0.4792	0.3564	0.2574	0.0184

Table A2.95 KI2, Spring, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	-0.0010	0.0000	-0.0052	-0.0128	-0.0076	0.0062	0.0114	0.0082	0.0000
500	-0.0068	-0.0096	-0.0074	-0.0236	-0.0126	-0.0076	-0.0032	-0.0022	-0.0008
750	0.0062	0.0038	0.0040	0.0012	0.0058	0.0132	0.0210	0.0112	0.0018
1000	0.0202	0.0184	0.0210	0.0122	0.0178	0.0184	0.0284	0.0216	0.0008
1250	0.0208	0.0190	0.0198	0.0082	0.0192	0.0252	0.0278	0.0270	0.0026
1500	0.0290	0.0274	0.0312	0.0230	0.0292	0.0314	0.0378	0.0346	0.0024
1750	0.0372	0.0414	0.0428	0.0402	0.0486	0.0624	0.0634	0.0478	0.0042
2000	0.0350	0.0386	0.0398	0.0256	0.0438	0.0478	0.0526	0.0378	0.0008
2250	0.0346	0.0374	0.0406	0.0388	0.0550	0.0496	0.0548	0.0472	0.0036
2500	0.0278	0.0292	0.0320	0.0350	0.0516	0.0576	0.0574	0.0468	0.0036
2750	0.0422	0.0474	0.0524	0.0442	0.0662	0.0688	0.0674	0.0566	0.0018
3000	0.0462	0.0484	0.0530	0.0484	0.0630	0.0744	0.0734	0.0588	0.0076
3250	0.0510	0.0530	0.0558	0.0536	0.0728	0.0820	0.0782	0.0608	0.0062
3500	0.0474	0.0528	0.0570	0.0582	0.0814	0.0854	0.0842	0.0718	0.0050
3750	0.0714	0.0734	0.0776	0.0752	0.0878	0.0908	0.0898	0.0750	0.0042
4000	0.0680	0.0734	0.0796	0.0822	0.1024	0.1040	0.1076	0.0886	0.0082
4250	0.0736	0.0818	0.0860	0.0886	0.1160	0.1328	0.1234	0.1022	0.0120
4500	0.0786	0.0858	0.0912	0.0938	0.1230	0.1434	0.1402	0.1110	0.0114
4750	0.0732	0.0810	0.0852	0.0850	0.1130	0.1224	0.1268	0.1082	0.0142
5000	0.0762	0.0820	0.0866	0.0942	0.1098	0.1306	0.1312	0.1130	0.0128

Table A2.96 KI2, Spring, Density Independent. Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.1574	0.1518	0.1448	0.1284	0.0968	0.0690	0.0488	0.0326	0.0032
250	0.1646	0.1580	0.1512	0.1308	0.0976	0.0754	0.0544	0.0368	0.0022
500	0.1588	0.1532	0.1454	0.1264	0.0954	0.0720	0.0508	0.0344	0.0018
750	0.1630	0.1570	0.1514	0.1308	0.0994	0.0748	0.0524	0.0384	0.0022
1000	0.1840	0.1754	0.1666	0.1466	0.1170	0.0886	0.0652	0.0456	0.0026
1250	0.1884	0.1796	0.1706	0.1490	0.1186	0.0902	0.0634	0.0432	0.0036
1500	0.1936	0.1828	0.1742	0.1490	0.1182	0.0870	0.0618	0.0454	0.0022
1750	0.2234	0.2150	0.2074	0.1796	0.1398	0.1062	0.0798	0.0524	0.0036
2000	0.2166	0.2102	0.2016	0.1748	0.1376	0.1018	0.0734	0.0492	0.0028
2250	0.2214	0.2120	0.2030	0.1796	0.1442	0.1086	0.0780	0.0528	0.0040
2500	0.2302	0.2228	0.2138	0.1896	0.1476	0.1106	0.0780	0.0540	0.0020
2750	0.2384	0.2284	0.2196	0.1964	0.1546	0.1192	0.0862	0.0584	0.0028
3000	0.2486	0.2370	0.2300	0.2038	0.1580	0.1192	0.0842	0.0586	0.0046
3250	0.2508	0.2420	0.2316	0.2056	0.1640	0.1284	0.0956	0.0660	0.0042
3500	0.2590	0.2510	0.2412	0.2124	0.1668	0.1304	0.0984	0.0716	0.0042
3750	0.2614	0.2536	0.2438	0.2182	0.1756	0.1390	0.1014	0.0726	0.0026
4000	0.2834	0.2734	0.2636	0.2368	0.1914	0.1462	0.1074	0.0738	0.0058
4250	0.3026	0.2902	0.2824	0.2500	0.2040	0.1606	0.1250	0.0902	0.0058
4500	0.3190	0.3084	0.3006	0.2712	0.2246	0.1718	0.1350	0.0984	0.0074
4750	0.3122	0.3020	0.2938	0.2616	0.2168	0.1686	0.1288	0.0990	0.0082
5000	0.3218	0.3092	0.3006	0.2720	0.2208	0.1758	0.1332	0.0948	0.0078

Table A2.97 KI2, Spring, Density Independent. Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0072	0.0062	0.0064	0.0024	0.0008	0.0064	0.0056	0.0042	-0.0010
500	0.0014	0.0014	0.0006	-0.0020	-0.0014	0.0030	0.0020	0.0018	-0.0014
750	0.0056	0.0052	0.0066	0.0024	0.0026	0.0058	0.0036	0.0058	-0.0010
1000	0.0266	0.0236	0.0218	0.0182	0.0202	0.0196	0.0164	0.0130	-0.0006
1250	0.0310	0.0278	0.0258	0.0206	0.0218	0.0212	0.0146	0.0106	0.0004
1500	0.0362	0.0310	0.0294	0.0206	0.0214	0.0180	0.0130	0.0128	-0.0010
1750	0.0660	0.0632	0.0626	0.0512	0.0430	0.0372	0.0310	0.0198	0.0004
2000	0.0592	0.0584	0.0568	0.0464	0.0408	0.0328	0.0246	0.0166	-0.0004
2250	0.0640	0.0602	0.0582	0.0512	0.0474	0.0396	0.0292	0.0202	0.0008
2500	0.0728	0.0710	0.0690	0.0612	0.0508	0.0416	0.0292	0.0214	-0.0012
2750	0.0810	0.0766	0.0748	0.0680	0.0578	0.0502	0.0374	0.0258	-0.0004
3000	0.0912	0.0852	0.0852	0.0754	0.0612	0.0502	0.0354	0.0260	0.0014
3250	0.0934	0.0902	0.0868	0.0772	0.0672	0.0594	0.0468	0.0334	0.0010
3500	0.1016	0.0992	0.0964	0.0840	0.0700	0.0614	0.0496	0.0390	0.0010
3750	0.1040	0.1018	0.0990	0.0898	0.0788	0.0700	0.0526	0.0400	-0.0006
4000	0.1260	0.1216	0.1188	0.1084	0.0946	0.0772	0.0586	0.0412	0.0026
4250	0.1452	0.1384	0.1376	0.1216	0.1072	0.0916	0.0762	0.0576	0.0026
4500	0.1616	0.1566	0.1558	0.1428	0.1278	0.1028	0.0862	0.0658	0.0042
4750	0.1548	0.1502	0.1490	0.1332	0.1200	0.0996	0.0800	0.0664	0.0050
5000	0.1644	0.1574	0.1558	0.1436	0.1240	0.1068	0.0844	0.0622	0.0046

Table A2.98 KI2, Spring, Density Independent. Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4874	0.4736	0.4360	0.3718	0.3110	0.2528	0.1964	0.0202
250	0.5202	0.5080	0.4948	0.4594	0.3928	0.3278	0.2662	0.2068	0.0240
500	0.5130	0.5004	0.4850	0.4484	0.3878	0.3230	0.2624	0.2012	0.0228
750	0.5284	0.5140	0.5016	0.4638	0.4006	0.3330	0.2678	0.2068	0.0264
1000	0.5484	0.5324	0.5194	0.4834	0.4186	0.3564	0.2888	0.2306	0.0322
1250	0.5520	0.5356	0.5246	0.4828	0.4222	0.3542	0.2968	0.2364	0.0298
1500	0.5848	0.5736	0.5602	0.5216	0.4526	0.3866	0.3120	0.2428	0.0298
1750	0.6024	0.5890	0.5788	0.5420	0.4784	0.4092	0.3374	0.2746	0.0372
2000	0.6042	0.5940	0.5820	0.5440	0.4766	0.4014	0.3294	0.2636	0.0328
2250	0.6038	0.5912	0.5824	0.5464	0.4784	0.4100	0.3388	0.2672	0.0350
2500	0.6126	0.6024	0.5890	0.5516	0.4844	0.4118	0.3494	0.2792	0.0360
2750	0.6284	0.6166	0.6064	0.5722	0.5086	0.4372	0.3638	0.2918	0.0398
3000	0.6476	0.6370	0.6234	0.5882	0.5202	0.4502	0.3754	0.3040	0.0428
3250	0.6598	0.6498	0.6376	0.5992	0.5338	0.4582	0.3862	0.3072	0.0478
3500	0.6616	0.6504	0.6396	0.6010	0.5318	0.4572	0.3880	0.3172	0.0516
3750	0.6700	0.6586	0.6432	0.6056	0.5352	0.4726	0.3966	0.3186	0.0498
4000	0.7012	0.6892	0.6768	0.6424	0.5758	0.5020	0.4250	0.3484	0.0530
4250	0.7050	0.6954	0.6820	0.6442	0.5776	0.5092	0.4372	0.3670	0.0670
4500	0.7232	0.7124	0.7022	0.6678	0.6046	0.5354	0.4572	0.3800	0.0682
4750	0.7144	0.7036	0.6912	0.6538	0.5840	0.5184	0.4504	0.3718	0.0714
5000	0.7174	0.7084	0.6976	0.6614	0.5970	0.5262	0.4588	0.3808	0.0674

Table A2.99 KI2, Spring, Density Independent. Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0202	0.0206	0.0212	0.0234	0.0210	0.0168	0.0134	0.0104	0.0038
500	0.0130	0.0130	0.0114	0.0124	0.0160	0.0120	0.0096	0.0048	0.0026
750	0.0284	0.0266	0.0280	0.0278	0.0288	0.0220	0.0150	0.0104	0.0062
1000	0.0484	0.0450	0.0458	0.0474	0.0468	0.0454	0.0360	0.0342	0.0120
1250	0.0520	0.0482	0.0510	0.0468	0.0504	0.0432	0.0440	0.0400	0.0096
1500	0.0848	0.0862	0.0866	0.0856	0.0808	0.0756	0.0592	0.0464	0.0096
1750	0.1024	0.1016	0.1052	0.1060	0.1066	0.0982	0.0846	0.0782	0.0170
2000	0.1042	0.1066	0.1084	0.1080	0.1048	0.0904	0.0766	0.0672	0.0126
2250	0.1038	0.1038	0.1088	0.1104	0.1066	0.0990	0.0860	0.0708	0.0148
2500	0.1126	0.1150	0.1154	0.1156	0.1126	0.1008	0.0966	0.0828	0.0158
2750	0.1284	0.1292	0.1328	0.1362	0.1368	0.1262	0.1110	0.0954	0.0196
3000	0.1476	0.1496	0.1498	0.1522	0.1484	0.1392	0.1226	0.1076	0.0226
3250	0.1598	0.1624	0.1640	0.1632	0.1620	0.1472	0.1334	0.1108	0.0276
3500	0.1616	0.1630	0.1660	0.1650	0.1600	0.1462	0.1352	0.1208	0.0314
3750	0.1700	0.1712	0.1696	0.1696	0.1634	0.1616	0.1438	0.1222	0.0296
4000	0.2012	0.2018	0.2032	0.2064	0.2040	0.1910	0.1722	0.1520	0.0328
4250	0.2050	0.2080	0.2084	0.2082	0.2058	0.1982	0.1844	0.1706	0.0468
4500	0.2232	0.2250	0.2286	0.2318	0.2328	0.2244	0.2044	0.1836	0.0480
4750	0.2144	0.2162	0.2176	0.2178	0.2122	0.2074	0.1976	0.1754	0.0512
5000	0.2174	0.2210	0.2240	0.2254	0.2252	0.2152	0.2060	0.1844	0.0472

Table A2.100 KI2, Spring, Density Dependent: Weibull b=1.2 . Population growth rate.

Additional adult mortality	Median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	1.003890807	0.9859219475	1.023851555
250	1.003765436	0.9855072869	1.022586629
500	1.003780176	0.9856185123	1.023517599
750	1.003803858	0.9853157637	1.022840607
1000	1.003356860	0.9852378062	1.023134691
1250	1.003121888	0.9855773679	1.022124771
1500	1.003209474	0.9851087054	1.023066783
1750	1.003080437	0.9852935364	1.021813887
2000	1.003068074	0.9855462967	1.022025565
2250	1.002640508	0.9843901894	1.022260253
2500	1.002993876	0.9854224745	1.022296942
2750	1.002569093	0.9847063662	1.022047317
3000	1.002688631	0.9844975889	1.022261503
3250	1.002358671	0.9845750376	1.021570175
3500	1.002125351	0.9838363234	1.022343748
3750	1.001937607	0.9845329909	1.021176736
4000	1.002251677	0.9840301089	1.021269133
4250	1.001886570	0.9839603296	1.021307234
4500	1.001946108	0.9844781443	1.020167008
4750	1.001892380	0.9839535528	1.020414912
5000	1.001775786	0.9833708445	1.020671906

Table A2.101 KI2, Spring, Density Dependent: Weibull b=1.2 . Change in population growth rate.

Additional adult mortality	Change in median growth rate	Lower 95% c.i.	Upper 95% c.i.
0	0.00000000000000	0.0000000000000	0.0000000000000
250	-0.00012537025498	-0.0004146605880	-0.0012649255775
500	-0.00011063060663	-0.0003034351763	-0.0003339552062
750	-0.00008694894483	-0.0006061837855	-0.0010109476041
1000	-0.00053394637310	-0.0006841412572	-0.0007168638236
1250	-0.00076891862948	-0.0003445795334	-0.0017267833883
1500	-0.00068133210251	-0.0008132420738	-0.0007847719597
1750	-0.00081036932267	-0.0006284110749	-0.0020376673907
2000	-0.00082273293676	-0.0003756507551	-0.0018259901200
2250	-0.00125029860105	-0.0015317580849	-0.0015913017045
2500	-0.00089693060690	-0.0004994729555	-0.0015546131457
2750	-0.00132171327046	-0.0012155812375	-0.0018042371900
3000	-0.00120217594322	-0.0014243585648	-0.0015900514269
3250	-0.00153213601866	-0.0013469098811	-0.0022813800074
3500	-0.00176545541285	-0.0020856240755	-0.0015078064111
3750	-0.00195319928792	-0.0013889566188	-0.0026748184197
4000	-0.00163912911003	-0.0018918385949	-0.0025824215577
4250	-0.00200423665708	-0.0019616178255	-0.0025443211168
4500	-0.00194469876059	-0.0014438032004	-0.0036845463114
4750	-0.00199842665299	-0.0019683946289	-0.0034366423329
5000	-0.00211502049132	-0.0025511030131	-0.0031796487344

Table A2.102 KI2, Spring, Density Dependent: Weibull b=1.2 . Median population size at 5 year intervals.

Additional adult mortality	5th. yr.	10th. yr.	15th. yr.	20th. yr.	25th. yr.
0	651805.5	674803.0	690732.5	698984.0	705890.0
250	654254.5	677693.0	691632.0	700233.5	705657.5
500	652347.0	676611.0	689557.5	699910.5	703281.0
750	651236.0	672900.0	688164.5	696109.0	703015.5
1000	652413.5	674948.0	687441.5	696982.0	698791.5
1250	652468.0	673101.5	687665.0	694128.5	698224.0
1500	649148.5	669007.0	682363.5	691066.5	693861.5
1750	647200.5	669457.5	676833.5	683733.5	689930.0
2000	646307.0	666475.5	677859.0	685691.5	690425.5
2250	648880.5	666566.5	678931.0	682005.0	685936.0
2500	644189.5	660279.5	672483.0	683185.5	684397.0
2750	644715.0	659690.0	670354.5	677467.5	680320.5
3000	642507.5	662255.0	670262.0	675264.5	677915.0
3250	641928.5	659826.5	667793.0	672769.0	674389.0
3500	644923.5	657365.0	666822.0	672844.5	671988.0
3750	641805.0	654443.0	659258.0	666005.0	669969.5
4000	639330.5	653079.5	661803.5	667212.0	669050.5
4250	639636.5	653388.5	660485.0	660949.5	665601.5
4500	639283.5	651617.0	658999.0	660910.5	664426.0
4750	640527.0	654060.0	661600.5	662717.0	664417.0
5000	635093.0	647164.0	653023.5	657785.5	660789.5

Table A2.103 KI2, Spring, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.9190	0.8912	0.8632	0.7530	0.4988	0.2544	0.0990	0.0296	0
250	0.9094	0.8896	0.8594	0.7532	0.4946	0.2524	0.0950	0.0266	0
500	0.9144	0.8890	0.8648	0.7522	0.5006	0.2612	0.1048	0.0326	0
750	0.9160	0.8958	0.8732	0.7602	0.5116	0.2734	0.1040	0.0312	0
1000	0.9262	0.9036	0.8802	0.7696	0.5198	0.2744	0.1056	0.0296	0
1250	0.9154	0.8934	0.8684	0.7662	0.5086	0.2682	0.1136	0.0358	0
1500	0.9260	0.9060	0.8812	0.7772	0.5348	0.2828	0.1196	0.0378	0
1750	0.9256	0.9078	0.8884	0.7916	0.5506	0.3000	0.1286	0.0406	0
2000	0.9324	0.9132	0.8916	0.7954	0.5552	0.3080	0.1302	0.0424	0
2250	0.9416	0.9210	0.8970	0.8032	0.5630	0.3232	0.1364	0.0440	0
2500	0.9436	0.9290	0.9074	0.8106	0.5918	0.3310	0.1430	0.0482	0
2750	0.9424	0.9280	0.9064	0.8172	0.5982	0.3342	0.1414	0.0480	0
3000	0.9424	0.9278	0.9060	0.8252	0.6002	0.3442	0.1522	0.0512	0
3250	0.9494	0.9328	0.9132	0.8354	0.6090	0.3622	0.1634	0.0552	0
3500	0.9438	0.9274	0.9108	0.8304	0.6208	0.3668	0.1642	0.0548	0
3750	0.9486	0.9348	0.9150	0.8398	0.6320	0.3868	0.1818	0.0630	0
4000	0.9562	0.9408	0.9242	0.8470	0.6334	0.3760	0.1708	0.0586	0
4250	0.9522	0.9408	0.9244	0.8546	0.6506	0.3944	0.1826	0.0656	0
4500	0.9546	0.9416	0.9268	0.8562	0.6498	0.4054	0.1874	0.0678	0
4750	0.9540	0.9398	0.9244	0.8518	0.6570	0.4024	0.1926	0.0618	0
5000	0.9632	0.9496	0.9360	0.8760	0.6778	0.4124	0.1970	0.0708	0

Table A2.104 KI2, Spring, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in any year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	-0.0096	-0.0016	-0.0038	0.0002	-0.0042	-0.0020	-0.0040	-0.0030	0
500	-0.0046	-0.0022	0.0016	-0.0008	0.0018	0.0068	0.0058	0.0030	0
750	-0.0030	0.0046	0.0100	0.0072	0.0128	0.0190	0.0050	0.0016	0
1000	0.0072	0.0124	0.0170	0.0166	0.0210	0.0200	0.0066	0.0000	0
1250	-0.0036	0.0022	0.0052	0.0132	0.0098	0.0138	0.0146	0.0062	0
1500	0.0070	0.0148	0.0180	0.0242	0.0360	0.0284	0.0206	0.0082	0
1750	0.0066	0.0166	0.0252	0.0386	0.0518	0.0456	0.0296	0.0110	0
2000	0.0134	0.0220	0.0284	0.0424	0.0564	0.0536	0.0312	0.0128	0
2250	0.0226	0.0298	0.0338	0.0502	0.0642	0.0688	0.0374	0.0144	0
2500	0.0246	0.0378	0.0442	0.0576	0.0930	0.0766	0.0440	0.0186	0
2750	0.0234	0.0368	0.0432	0.0642	0.0994	0.0798	0.0424	0.0184	0
3000	0.0234	0.0366	0.0428	0.0722	0.1014	0.0898	0.0532	0.0216	0
3250	0.0304	0.0416	0.0500	0.0824	0.1102	0.1078	0.0644	0.0256	0
3500	0.0248	0.0362	0.0476	0.0774	0.1220	0.1124	0.0652	0.0252	0
3750	0.0296	0.0436	0.0518	0.0868	0.1332	0.1324	0.0828	0.0334	0
4000	0.0372	0.0496	0.0610	0.0940	0.1346	0.1216	0.0718	0.0290	0
4250	0.0332	0.0496	0.0612	0.1016	0.1518	0.1400	0.0836	0.0360	0
4500	0.0356	0.0504	0.0636	0.1032	0.1510	0.1510	0.0884	0.0382	0
4750	0.0350	0.0486	0.0612	0.0988	0.1582	0.1480	0.0936	0.0322	0
5000	0.0442	0.0584	0.0728	0.1230	0.1790	0.1580	0.0980	0.0412	0

Table A2.105 KI2, Spring, Density Dependent: Weibull b=1.2 . Probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.2086	0.1856	0.1688	0.1186	0.0572	0.0256	0.0082	0.0024	0
250	0.2152	0.1954	0.1718	0.1270	0.0624	0.0236	0.0084	0.0016	0
500	0.2160	0.1992	0.1800	0.1266	0.0660	0.0268	0.0094	0.0026	0
750	0.2168	0.1984	0.1820	0.1296	0.0708	0.0312	0.0110	0.0026	0
1000	0.2342	0.2120	0.1906	0.1434	0.0708	0.0292	0.0064	0.0016	0
1250	0.2352	0.2130	0.1916	0.1344	0.0688	0.0294	0.0076	0.0018	0
1500	0.2458	0.2212	0.2030	0.1460	0.0758	0.0354	0.0140	0.0040	0
1750	0.2470	0.2266	0.2052	0.1522	0.0780	0.0330	0.0140	0.0032	0
2000	0.2594	0.2370	0.2174	0.1592	0.0866	0.0380	0.0120	0.0030	0
2250	0.2728	0.2476	0.2200	0.1598	0.0852	0.0388	0.0158	0.0034	0
2500	0.2760	0.2512	0.2298	0.1668	0.0918	0.0396	0.0150	0.0046	0
2750	0.2892	0.2676	0.2414	0.1792	0.0954	0.0404	0.0152	0.0052	0
3000	0.3034	0.2794	0.2552	0.1922	0.1018	0.0440	0.0156	0.0054	0
3250	0.3008	0.2754	0.2534	0.1950	0.1126	0.0528	0.0184	0.0032	0
3500	0.3184	0.2920	0.2676	0.1994	0.1136	0.0540	0.0180	0.0070	0
3750	0.3292	0.3026	0.2770	0.2080	0.1220	0.0594	0.0230	0.0058	0
4000	0.3316	0.3068	0.2824	0.2106	0.1148	0.0538	0.0252	0.0054	0
4250	0.3482	0.3234	0.2982	0.2262	0.1284	0.0644	0.0262	0.0074	0
4500	0.3460	0.3180	0.2930	0.2294	0.1300	0.0624	0.0240	0.0070	0
4750	0.3488	0.3234	0.3000	0.2316	0.1296	0.0670	0.0230	0.0076	0
5000	0.3660	0.3402	0.3124	0.2348	0.1358	0.0704	0.0278	0.0082	0

Table A2.106 KI2, Spring, Density Dependent: Weibull b=1.2 . Change in probability of population falling below initial size (100%) and percentages (99-50%) of initial size in final year.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
250	0.0066	0.0098	0.0030	0.0084	0.0052	-0.0020	0.0002	-0.0008	0
500	0.0074	0.0136	0.0112	0.0080	0.0088	0.0012	0.0012	0.0002	0
750	0.0082	0.0128	0.0132	0.0110	0.0136	0.0056	0.0028	0.0002	0
1000	0.0256	0.0264	0.0218	0.0248	0.0136	0.0036	-0.0018	-0.0008	0
1250	0.0266	0.0274	0.0228	0.0158	0.0116	0.0038	-0.0006	-0.0006	0
1500	0.0372	0.0356	0.0342	0.0274	0.0186	0.0098	0.0058	0.0016	0
1750	0.0384	0.0410	0.0364	0.0336	0.0208	0.0074	0.0058	0.0008	0
2000	0.0508	0.0514	0.0486	0.0406	0.0294	0.0124	0.0038	0.0006	0
2250	0.0642	0.0620	0.0512	0.0412	0.0280	0.0132	0.0076	0.0010	0
2500	0.0674	0.0656	0.0610	0.0482	0.0346	0.0140	0.0068	0.0022	0
2750	0.0806	0.0820	0.0726	0.0606	0.0382	0.0148	0.0070	0.0028	0
3000	0.0948	0.0938	0.0864	0.0736	0.0446	0.0184	0.0074	0.0030	0
3250	0.0922	0.0898	0.0846	0.0764	0.0554	0.0272	0.0102	0.0008	0
3500	0.1098	0.1064	0.0988	0.0808	0.0564	0.0284	0.0098	0.0046	0
3750	0.1206	0.1170	0.1082	0.0894	0.0648	0.0338	0.0148	0.0034	0
4000	0.1230	0.1212	0.1136	0.0920	0.0576	0.0282	0.0170	0.0030	0
4250	0.1396	0.1378	0.1294	0.1076	0.0712	0.0388	0.0180	0.0050	0
4500	0.1374	0.1324	0.1242	0.1108	0.0728	0.0368	0.0158	0.0046	0
4750	0.1402	0.1378	0.1312	0.1130	0.0724	0.0414	0.0148	0.0052	0
5000	0.1574	0.1546	0.1436	0.1162	0.0786	0.0448	0.0196	0.0058	0

Table A2.107 KI2, Spring, Density Dependent: Weibull b=1.2 . Probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.5000	0.4728	0.4428	0.3718	0.2352	0.1280	0.0568	0.0202	0.0000
250	0.5016	0.4760	0.4472	0.3718	0.2396	0.1360	0.0622	0.0196	0.0000
500	0.5092	0.4812	0.4514	0.3708	0.2428	0.1334	0.0656	0.0232	0.0000
750	0.5082	0.4818	0.4586	0.3776	0.2404	0.1394	0.0704	0.0278	0.0000
1000	0.5248	0.5006	0.4708	0.3912	0.2558	0.1520	0.0702	0.0244	0.0000
1250	0.5332	0.5022	0.4748	0.3882	0.2624	0.1442	0.0686	0.0272	0.0000
1500	0.5498	0.5220	0.4908	0.4088	0.2732	0.1542	0.0754	0.0306	0.0002
1750	0.5654	0.5406	0.5084	0.4166	0.2778	0.1628	0.0778	0.0294	0.0000
2000	0.5612	0.5312	0.5038	0.4210	0.2870	0.1686	0.0862	0.0332	0.0000
2250	0.5782	0.5502	0.5238	0.4394	0.2990	0.1696	0.0844	0.0352	0.0000
2500	0.5760	0.5524	0.5288	0.4456	0.3036	0.1780	0.0912	0.0344	0.0000
2750	0.5944	0.5696	0.5422	0.4578	0.3148	0.1910	0.0950	0.0370	0.0000
3000	0.5996	0.5756	0.5500	0.4704	0.3288	0.2062	0.1010	0.0402	0.0000
3250	0.6160	0.5934	0.5678	0.4852	0.3308	0.2054	0.1116	0.0468	0.0000
3500	0.6284	0.6024	0.5780	0.4936	0.3472	0.2114	0.1128	0.0494	0.0000
3750	0.6336	0.6074	0.5846	0.5026	0.3608	0.2194	0.1210	0.0520	0.0000
4000	0.6362	0.6122	0.5880	0.5080	0.3596	0.2234	0.1140	0.0482	0.0000
4250	0.6496	0.6248	0.6002	0.5190	0.3792	0.2388	0.1274	0.0564	0.0000
4500	0.6484	0.6240	0.6038	0.5266	0.3816	0.2412	0.1294	0.0562	0.0002
4750	0.6538	0.6320	0.6080	0.5246	0.3778	0.2466	0.1294	0.0598	0.0000
5000	0.6794	0.6542	0.6254	0.5428	0.3948	0.2468	0.1346	0.0650	0.0000

Table A2.108 KI2, Spring, Density Dependent: Weibull b=1.2 . Change in probability final year population size will be less than median (100%) unimpacted population size and percentages (99-50%) of median unimpacted size.

Additional adult mortality	100%	99%	98%	95%	90%	85%	80%	75%	50%
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
250	0.0016	0.0032	0.0044	0.0000	0.0044	0.0080	0.0054	-0.0006	0.0000
500	0.0092	0.0084	0.0086	-0.0010	0.0076	0.0054	0.0088	0.0030	0.0000
750	0.0082	0.0090	0.0158	0.0058	0.0052	0.0114	0.0136	0.0076	0.0000
1000	0.0248	0.0278	0.0280	0.0194	0.0206	0.0240	0.0134	0.0042	0.0000
1250	0.0332	0.0294	0.0320	0.0164	0.0272	0.0162	0.0118	0.0070	0.0000
1500	0.0498	0.0492	0.0480	0.0370	0.0380	0.0262	0.0186	0.0104	0.0002
1750	0.0654	0.0678	0.0656	0.0448	0.0426	0.0348	0.0210	0.0092	0.0000
2000	0.0612	0.0584	0.0610	0.0492	0.0518	0.0406	0.0294	0.0130	0.0000
2250	0.0782	0.0774	0.0810	0.0676	0.0638	0.0416	0.0276	0.0150	0.0000
2500	0.0760	0.0796	0.0860	0.0738	0.0684	0.0500	0.0344	0.0142	0.0000
2750	0.0944	0.0968	0.0994	0.0860	0.0796	0.0630	0.0382	0.0168	0.0000
3000	0.0996	0.1028	0.1072	0.0986	0.0936	0.0782	0.0442	0.0200	0.0000
3250	0.1160	0.1206	0.1250	0.1134	0.0956	0.0774	0.0548	0.0266	0.0000
3500	0.1284	0.1296	0.1352	0.1218	0.1120	0.0834	0.0560	0.0292	0.0000
3750	0.1336	0.1346	0.1418	0.1308	0.1256	0.0914	0.0642	0.0318	0.0000
4000	0.1362	0.1394	0.1452	0.1362	0.1244	0.0954	0.0572	0.0280	0.0000
4250	0.1496	0.1520	0.1574	0.1472	0.1440	0.1108	0.0706	0.0362	0.0000
4500	0.1484	0.1512	0.1610	0.1548	0.1464	0.1132	0.0726	0.0360	0.0002
4750	0.1538	0.1592	0.1652	0.1528	0.1426	0.1186	0.0726	0.0396	0.0000
5000	0.1794	0.1814	0.1826	0.1710	0.1596	0.1188	0.0778	0.0448	0.0000