

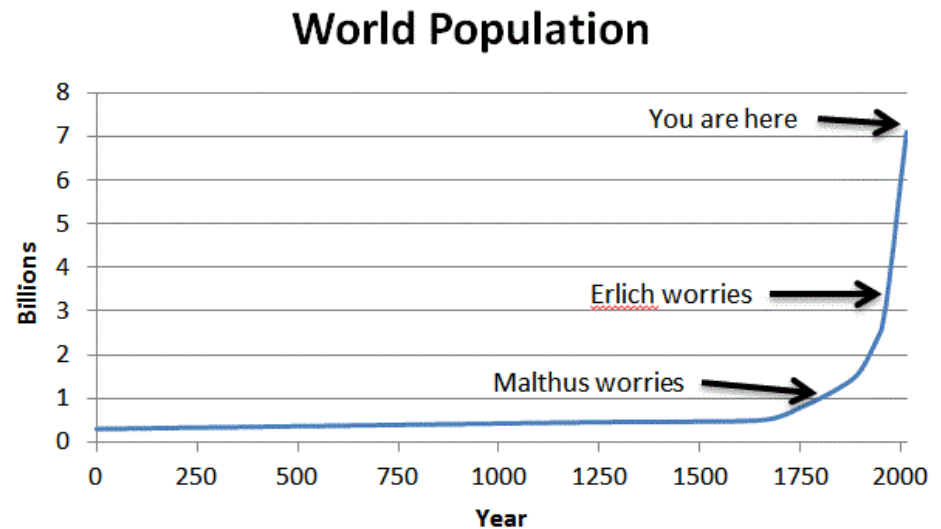
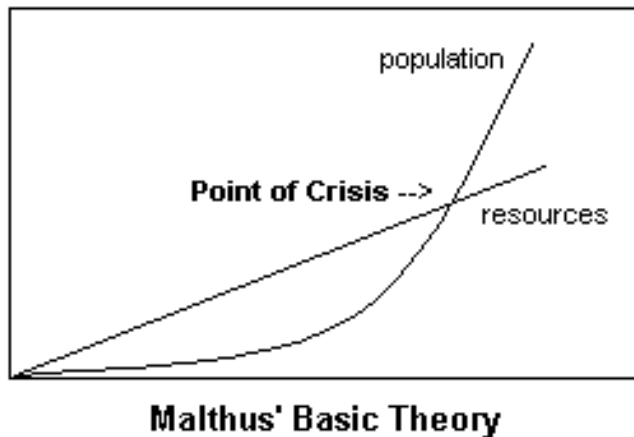
Wind farms and “clean” energy



Craig Symes

School of Animal, Plant &
Environmental Sciences

- Alternative “clean” energy
- Sustainable in the face of rapid global change
- Long term impacts on environment
- Human well-being – prioritise



Questions?

- Interactions on birds in flight – resident and transient
- Population modelling (Fatti 1978)
- Maximising wind turbine layout efficiency
- Trade-offs - economics
- Rotating blades create lift and attract birds?
- Collision Risk Modelling
- Alternative turbine designs?
- Other ideas?

South Africa – rapid growth

- Darling wind farm
(Simmons et al. 2011)





End-on-view of the turbine blade and “paddle” that acts as an air brake to stop the turbine rotating when winds become too strong.

Wind farm effects

- Bearded Vulture
- Population declines and extinction (Rushworth & Krüger 2014; Reid *et al.* 2015)

