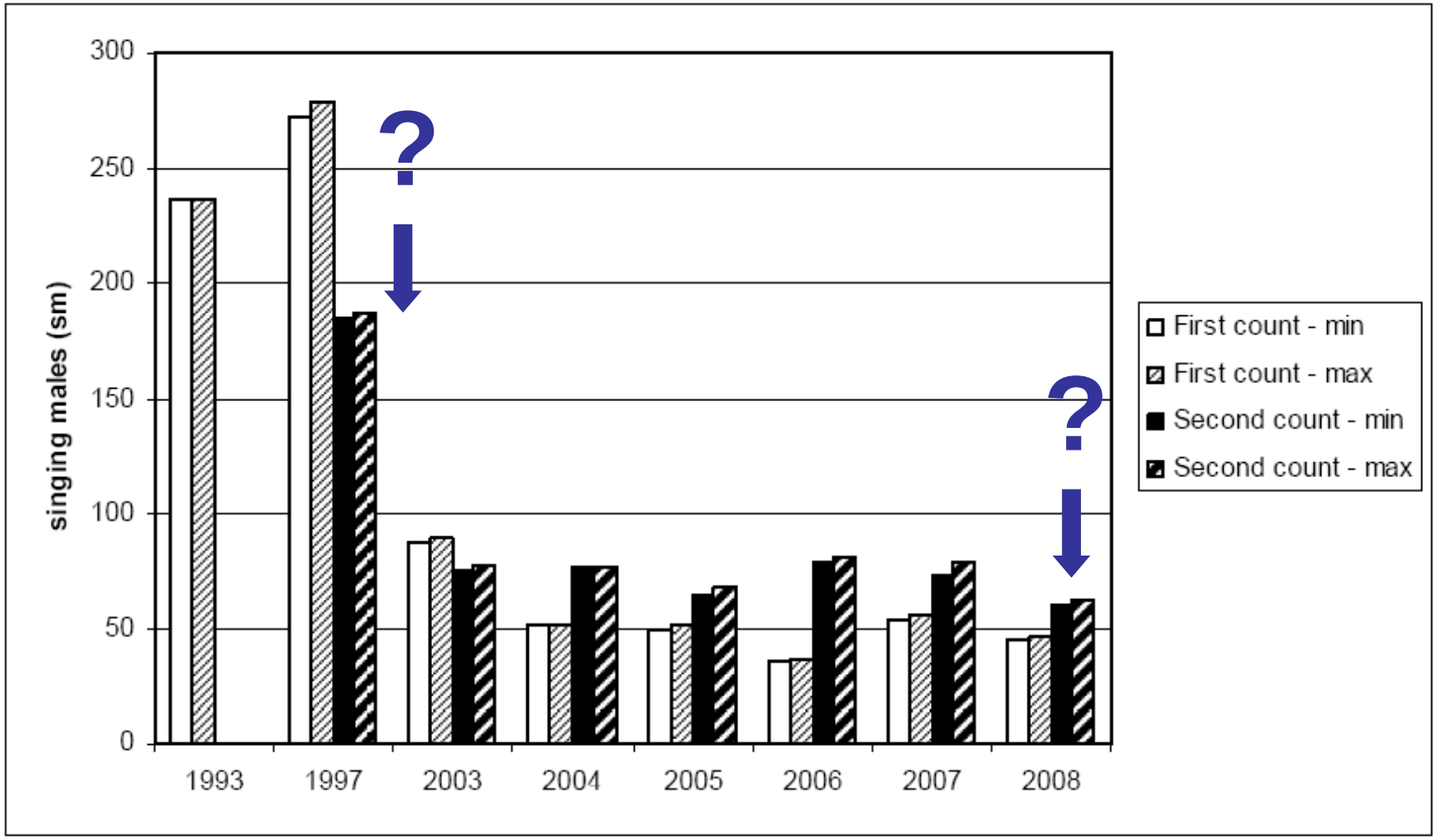
Colour ringing, population models, and bad Aquatic Warbler years

Introductory remarks

Jochen Bellebaum & Franziska Tanneberger

Pomeranian population 1993-2008



Sedge Warbler survival and AW trends

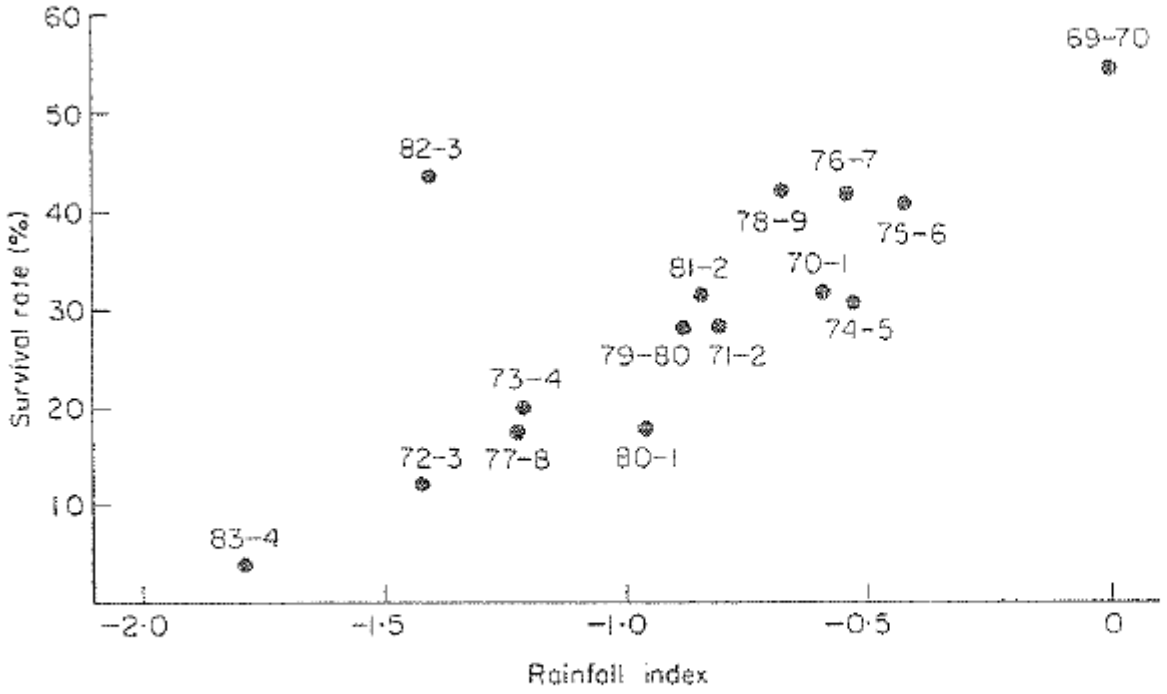
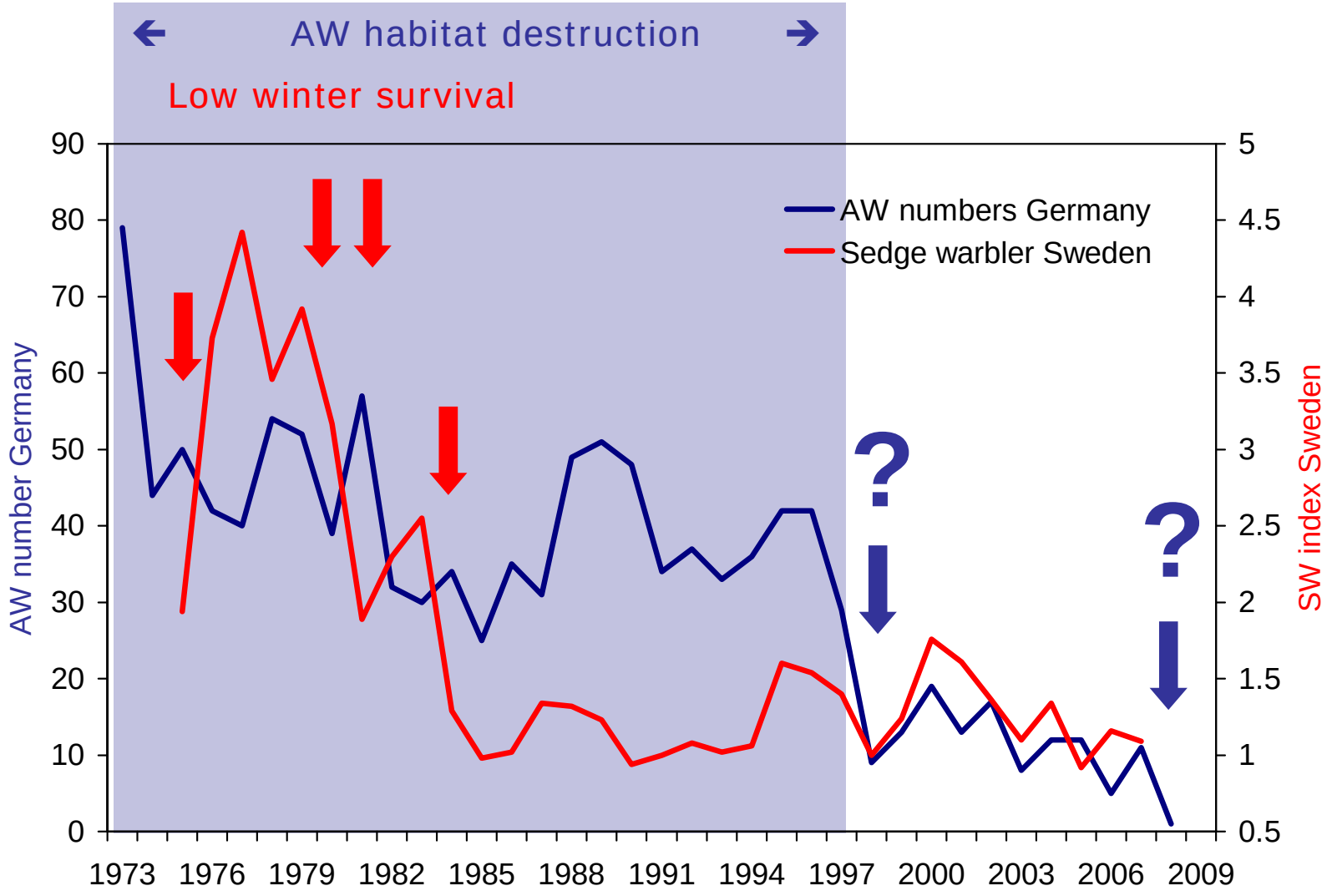


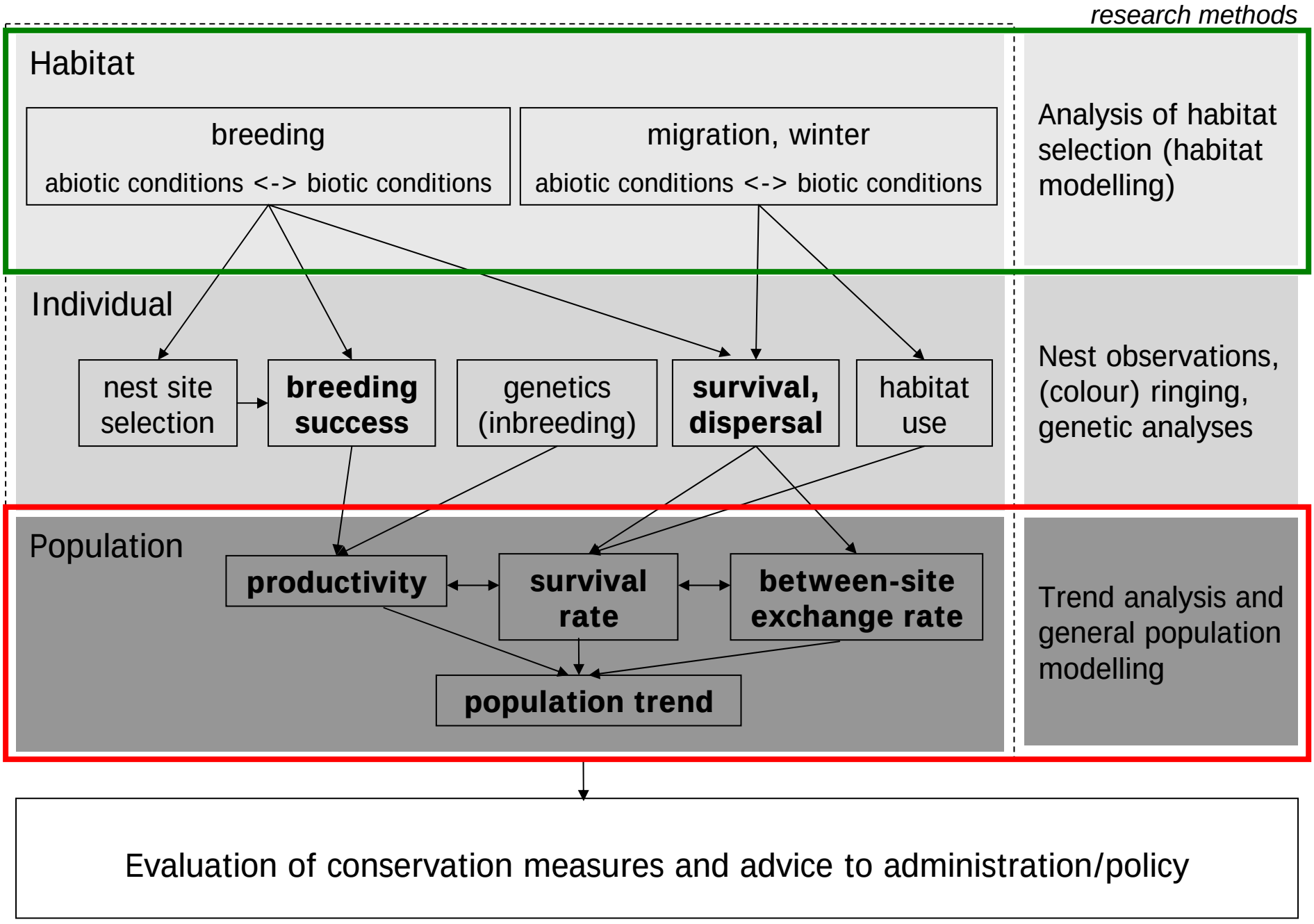
Figure 4. Estimated annual survival rates (%) of adult Sedge Warblers trapped between 1969 and 1984 at two sites in southern England plotted against an index of annual rainfall for the previous wet season (May–October) in the West African winter quarters. Survival estimates were generated by program SURGE (Clobert *et al.* 1987; Pradel *et al.* 1991) in which survival was modelled as time-dependent but site-independent, and recapture probability site-dependent and constant over time (Model (St. Ps) in Table 1).

Peach et al 1991

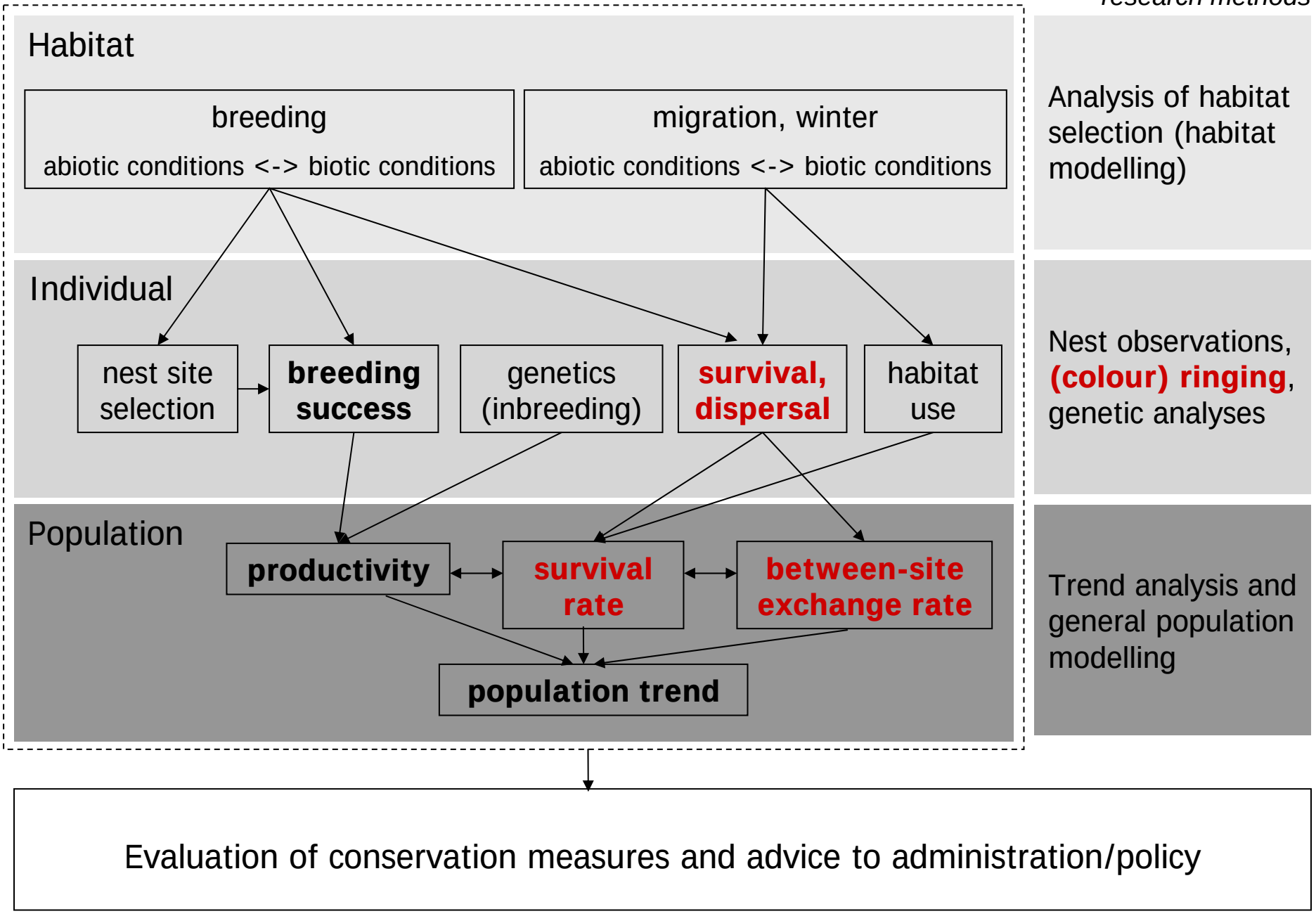
Sedge Warbler survival and AW trends



AWCT, Swedish common bird monitoring


research methods
Habitat
breeding
abiotic conditions <-> biotic conditions
migration, winter
abiotic conditions <-> biotic conditions
Analysis of habitat selection (habitat modelling)
Individual
nest site selection
breeding success
genetics (inbreeding)
survival, dispersal
habitat use
Nest observations, (colour) ringing, genetic analyses
Population
productivity
survival rate
between-site exchange rate
population trend
Trend analysis and general population modelling
Evaluation of conservation measures and advice to administration/policy

research methods



Information from (colour) ringing

Exchange rates (Pomerania)

Survival estimation

capture-mark-recapture/resighting analysis

In case of AW most promising:

colour ringing (more resightings)

isolated populations (smaller bias due to emigration)

Further possibilities:

- CMR data from staging areas?
- daily survival estimates in Senegal

Next steps

(1) Create ringing and recapture/resighting database

(2) Intensify current colour ringing/resighting activities where useful

(3) Analyse CMR data – in particular from breeding areas:
historical data (Rietzer See)
Biebrza valley (1995-97)
Belarus
Pomerania (since 1999)