

Climate-Based Seed Transfer

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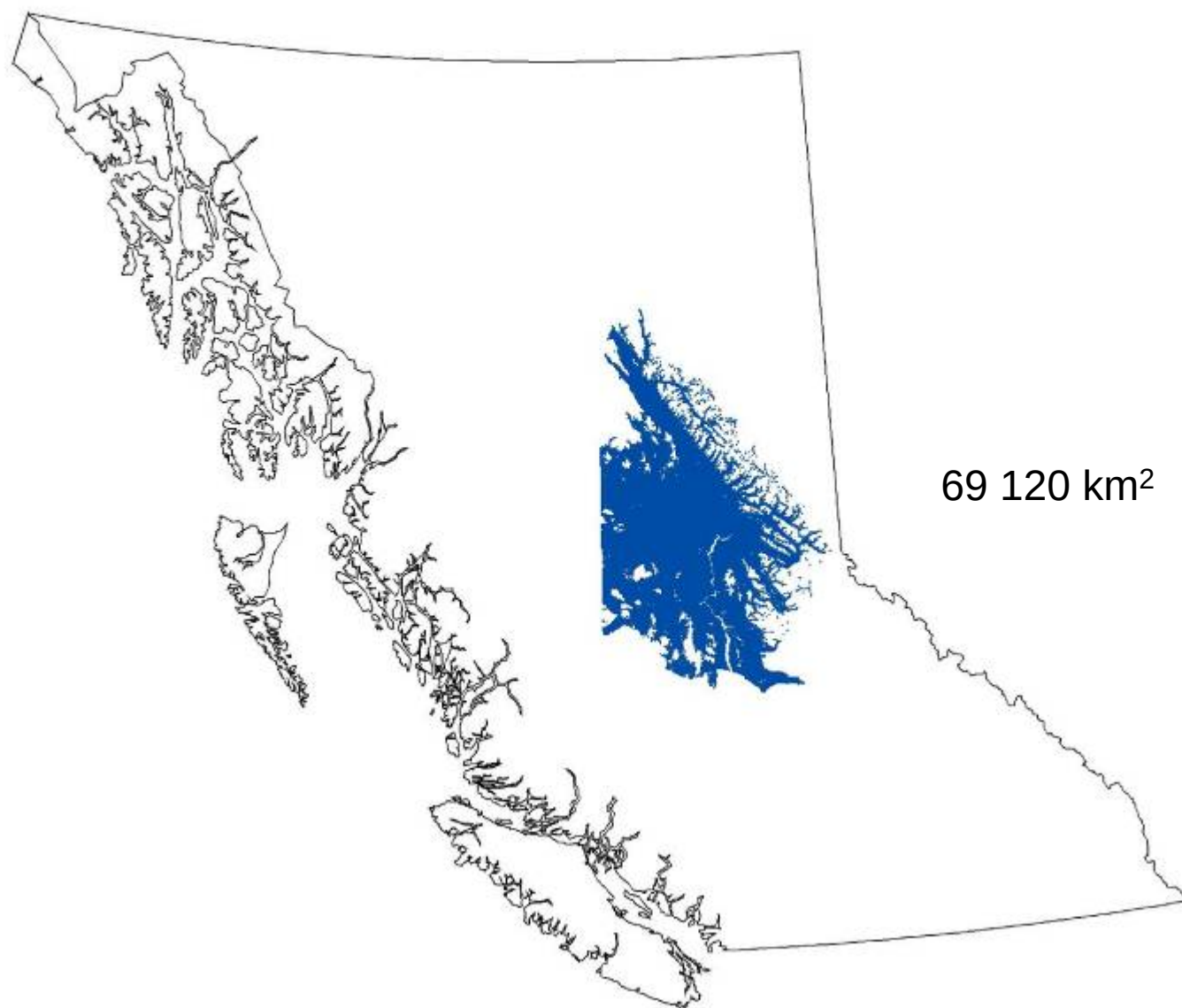
July 2008



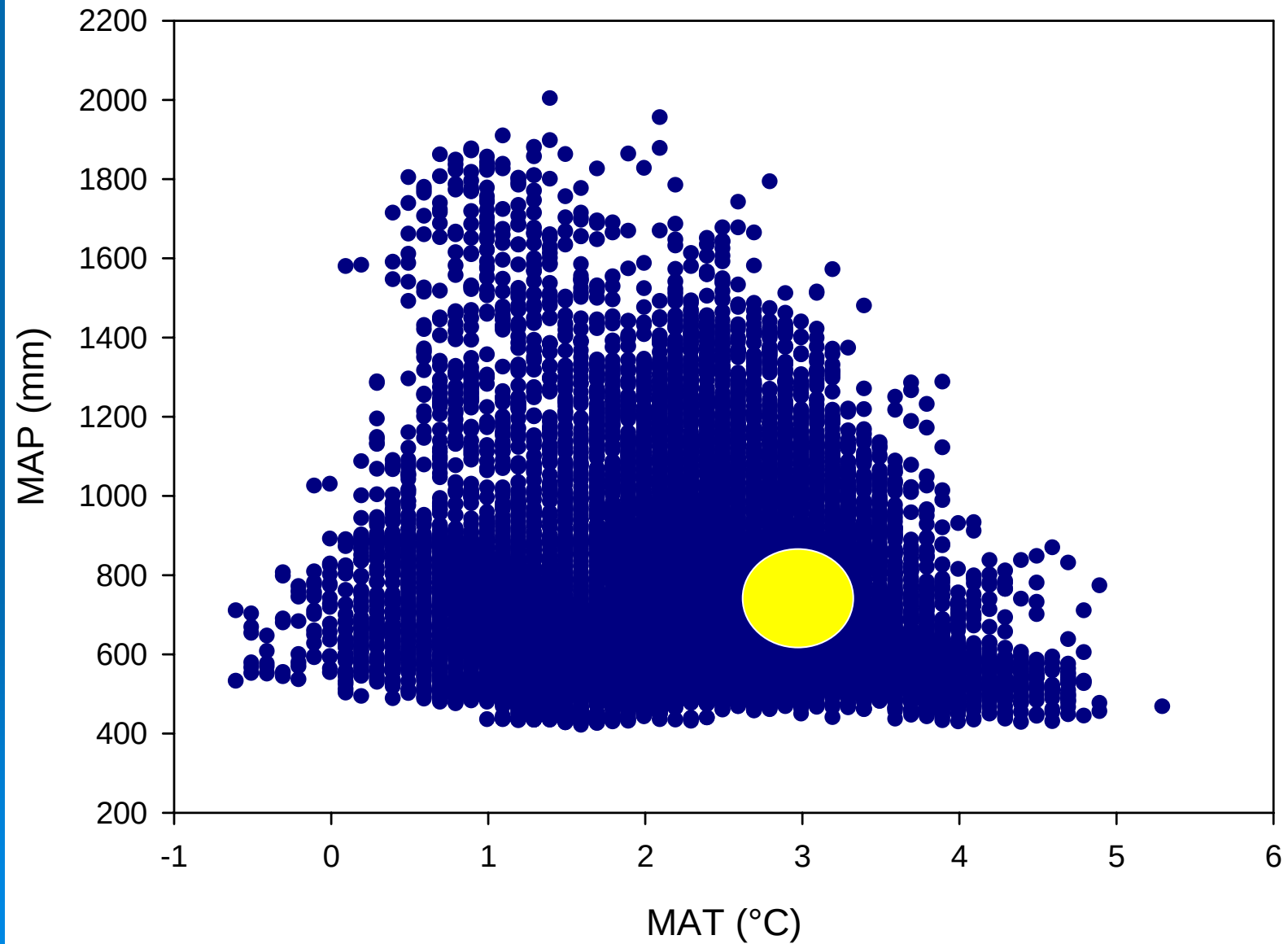
➤ Issue

- The genecology revolution (ClimateBC, GIS new statistical methods) allows for improvements to BC's seed transfer system.
- Assisted migration requires a climate-based seed transfer system.

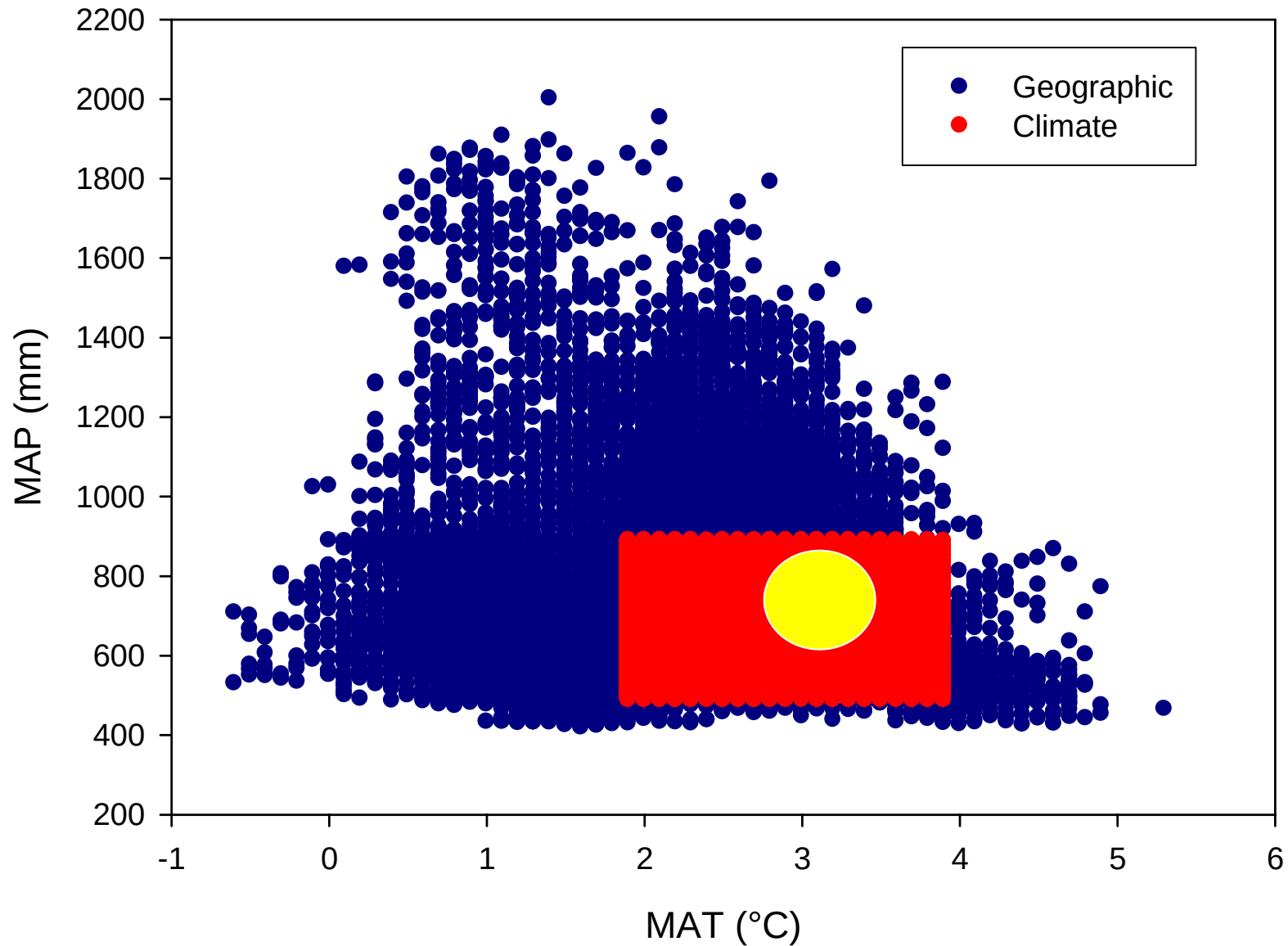
Geographic-based deployment zone for Sx PG Low



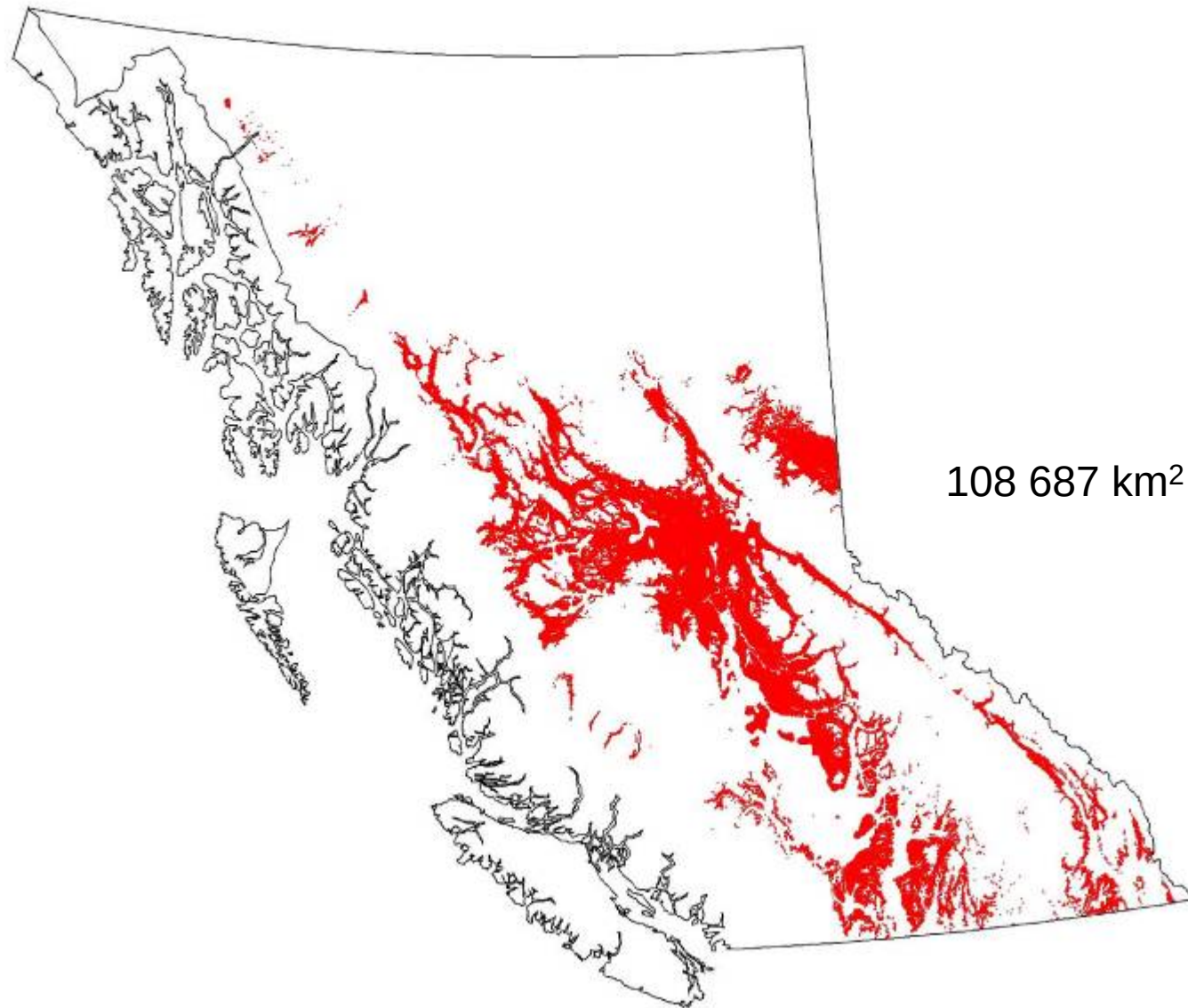
Geographic-based deployment zone for Sx PG Low



Geographic and climate-based deployment zone for PG Sx Low

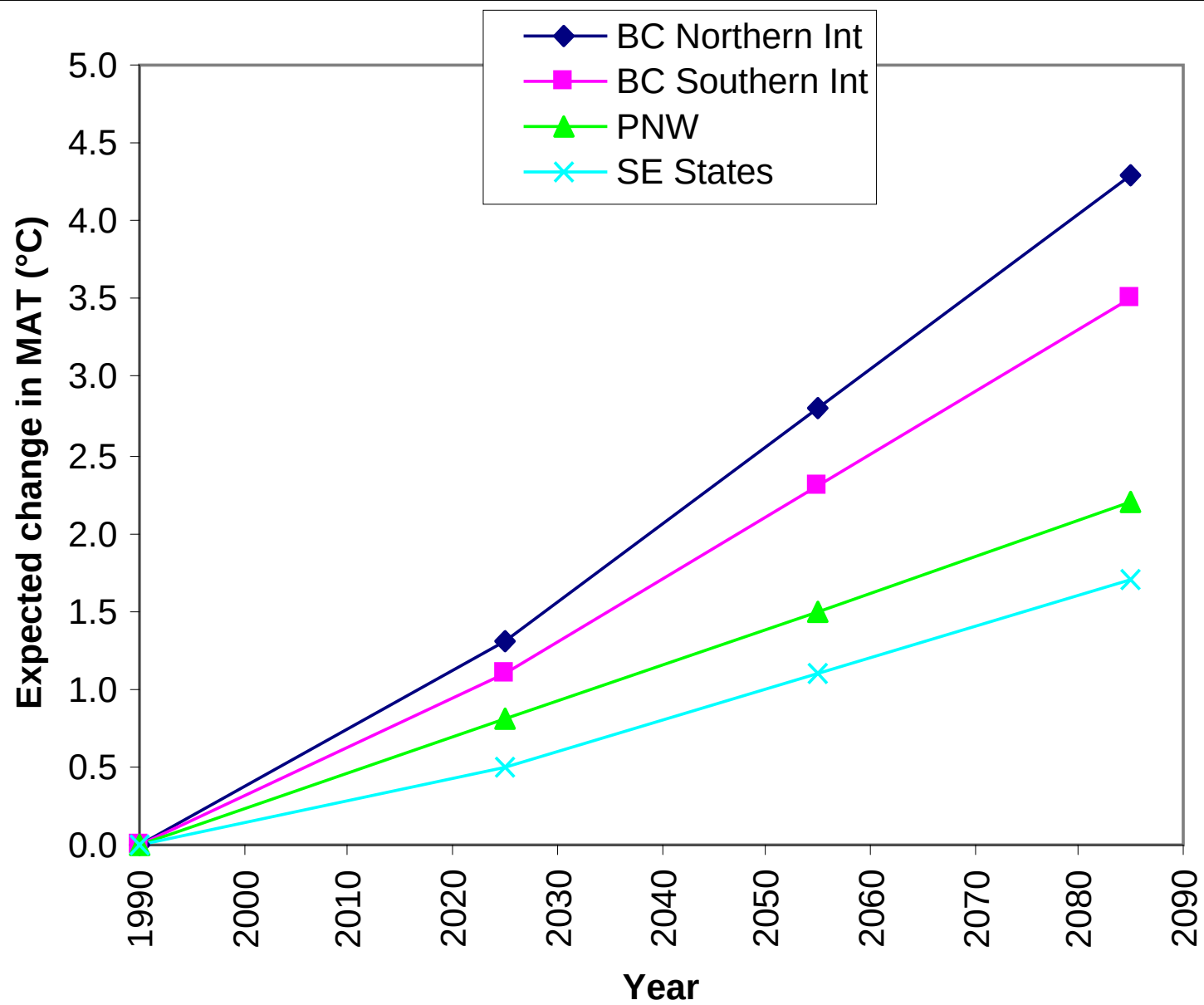


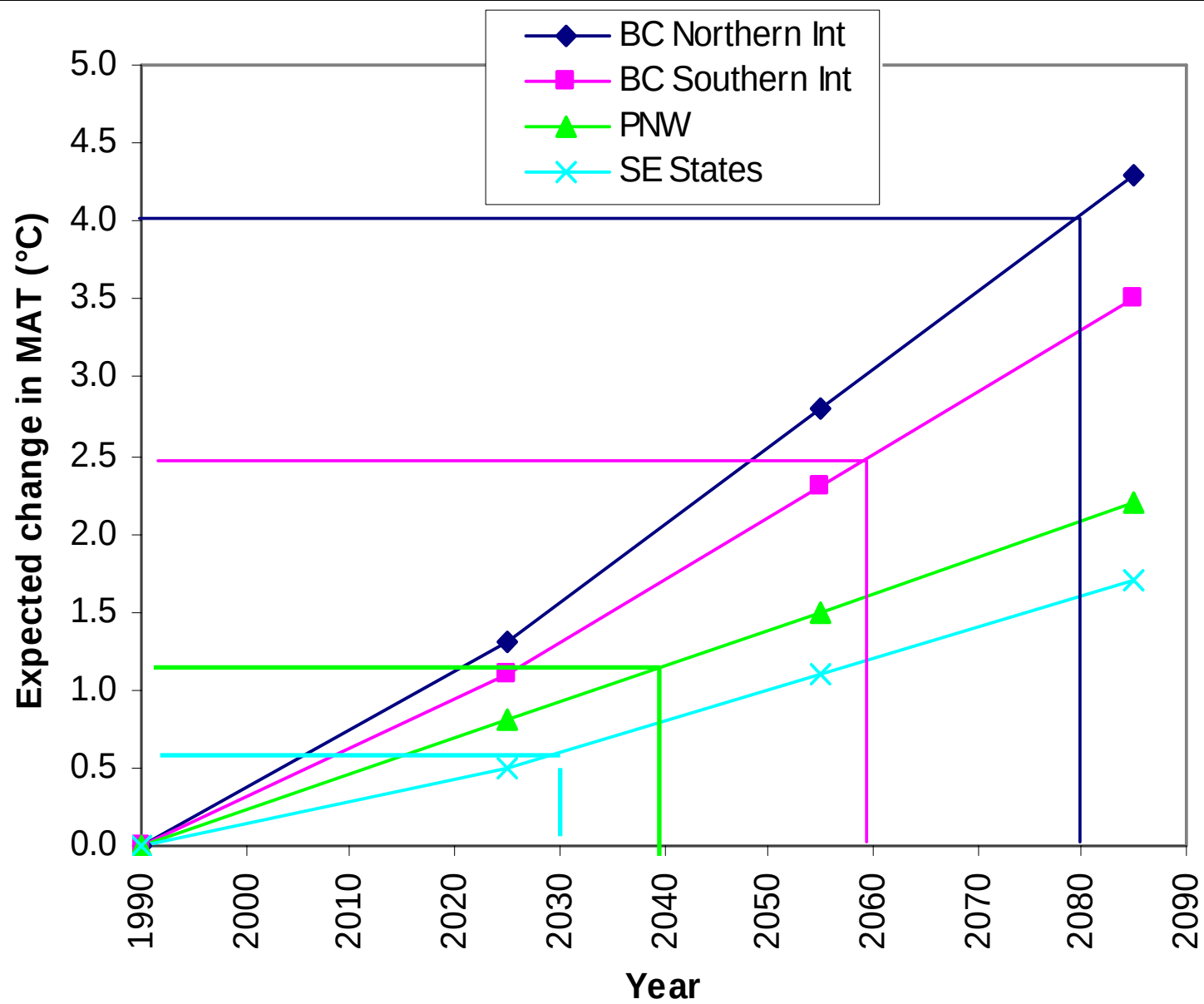
Climate-based deployment zone for Sx PG Low

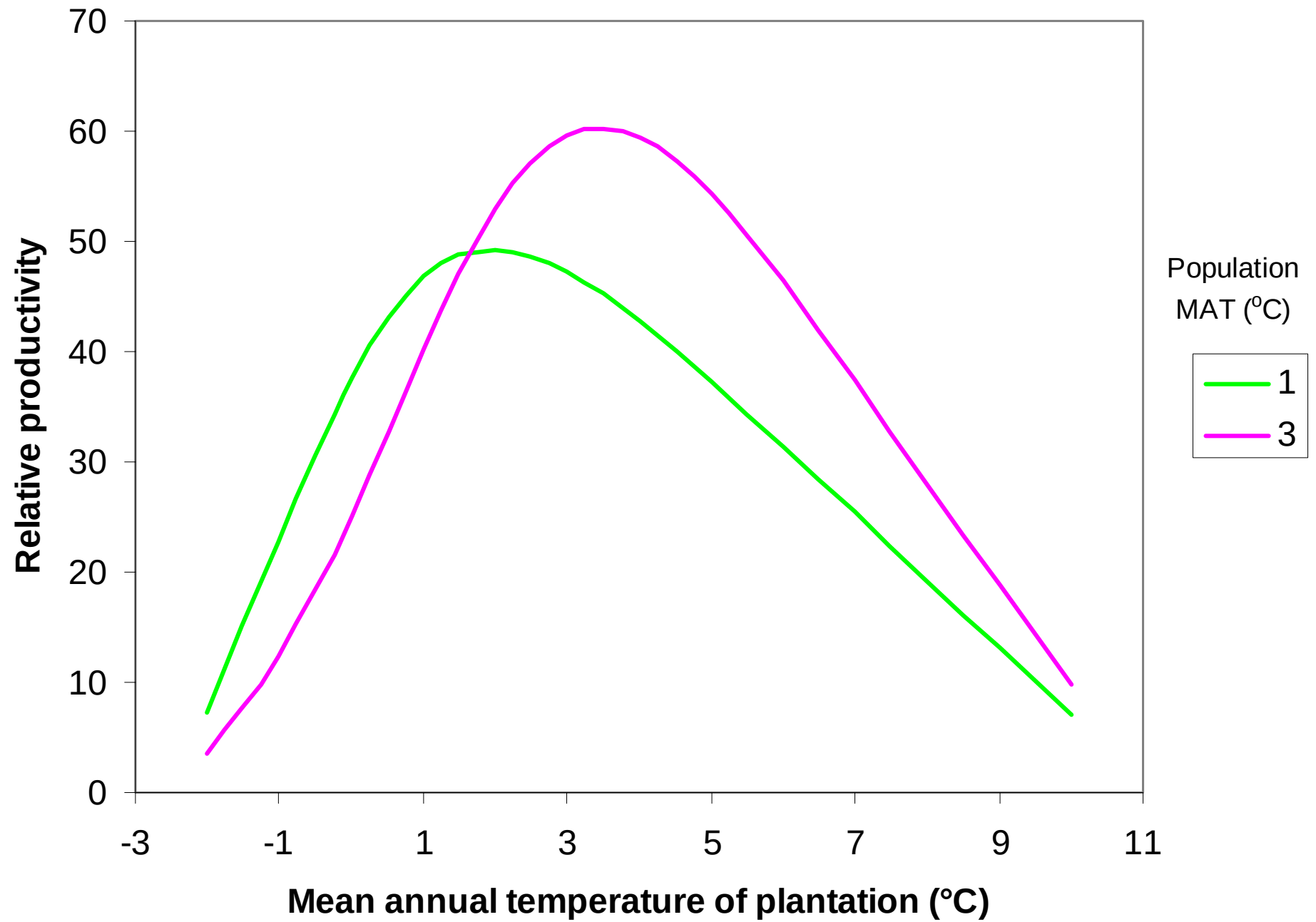


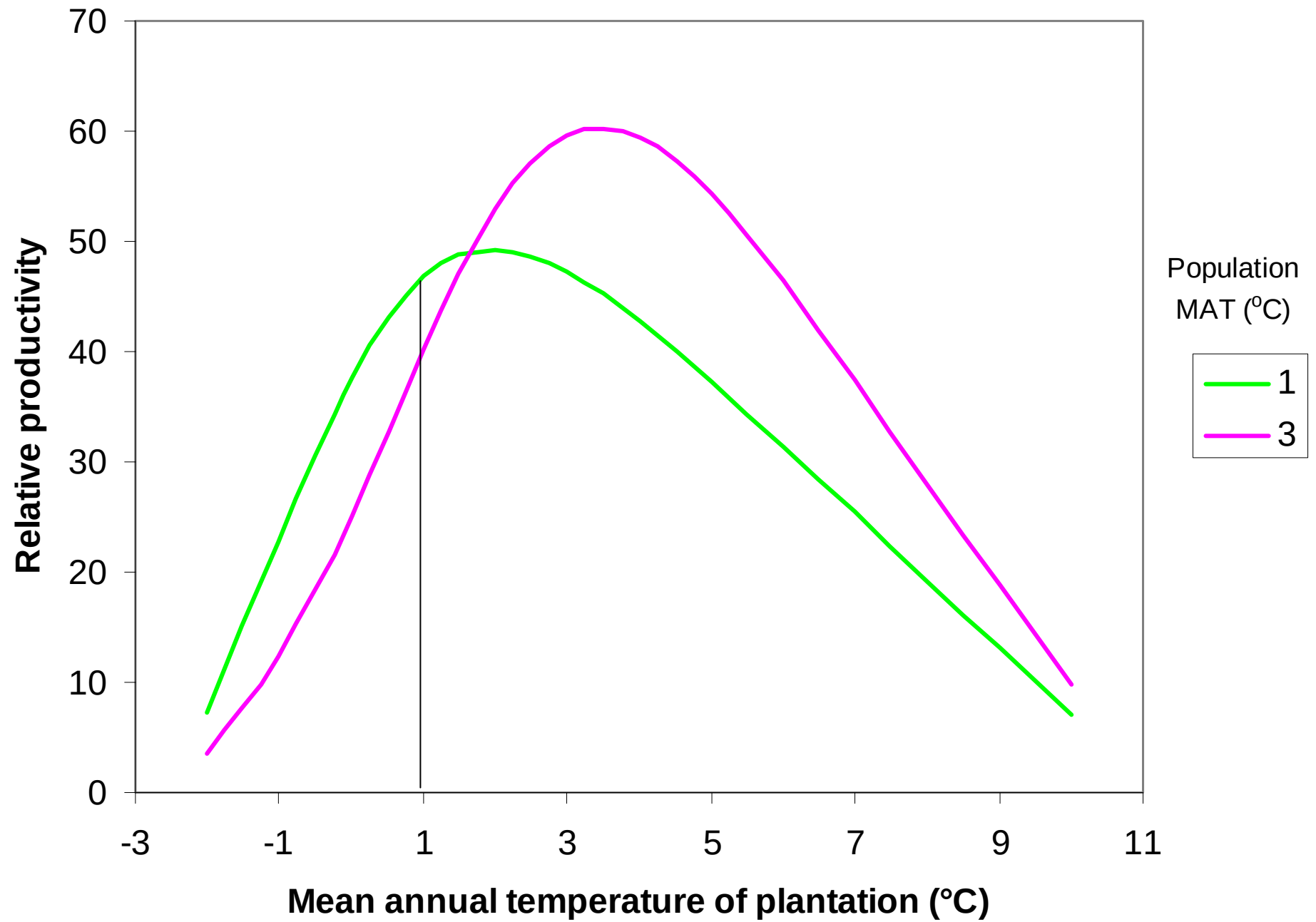
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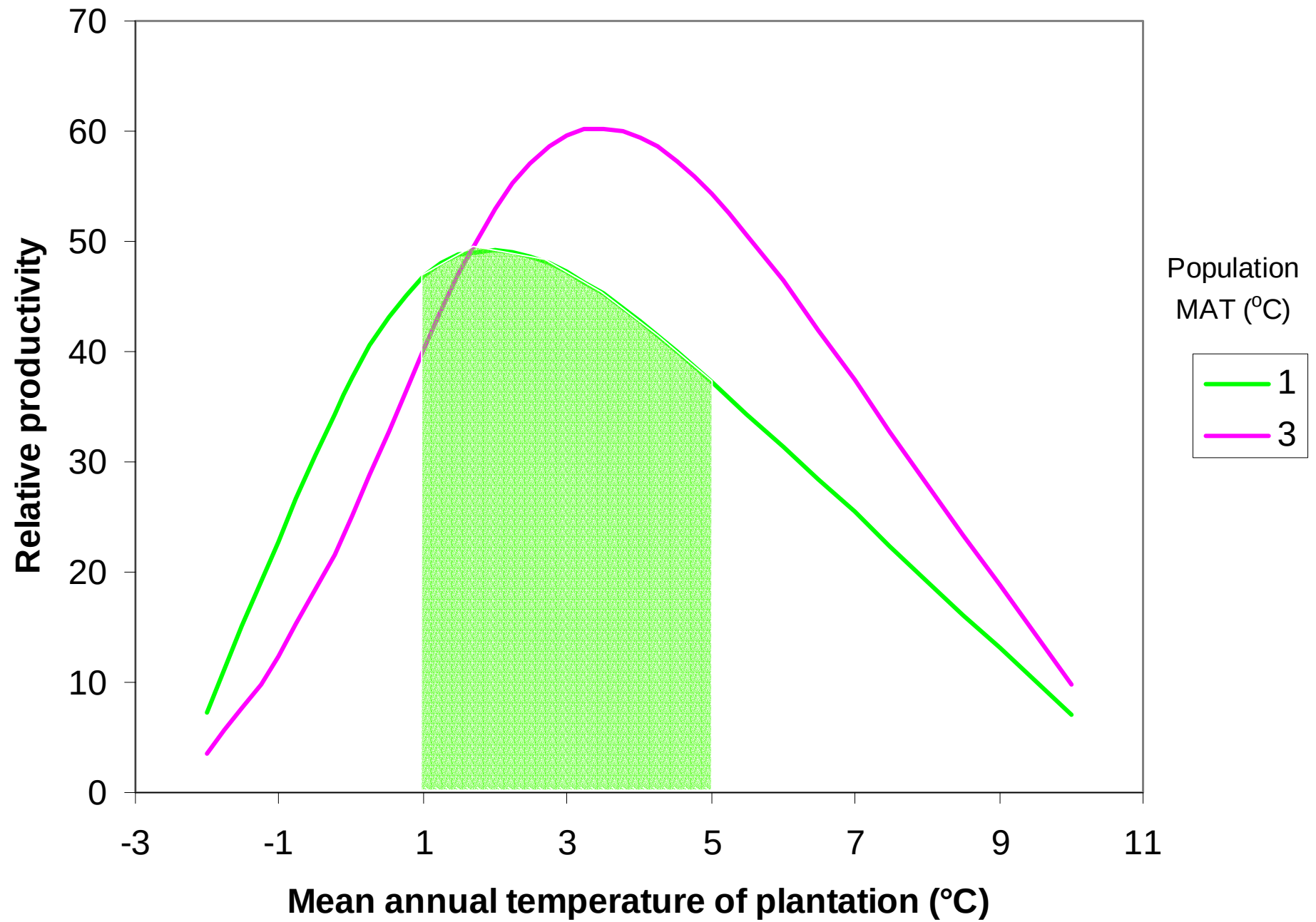
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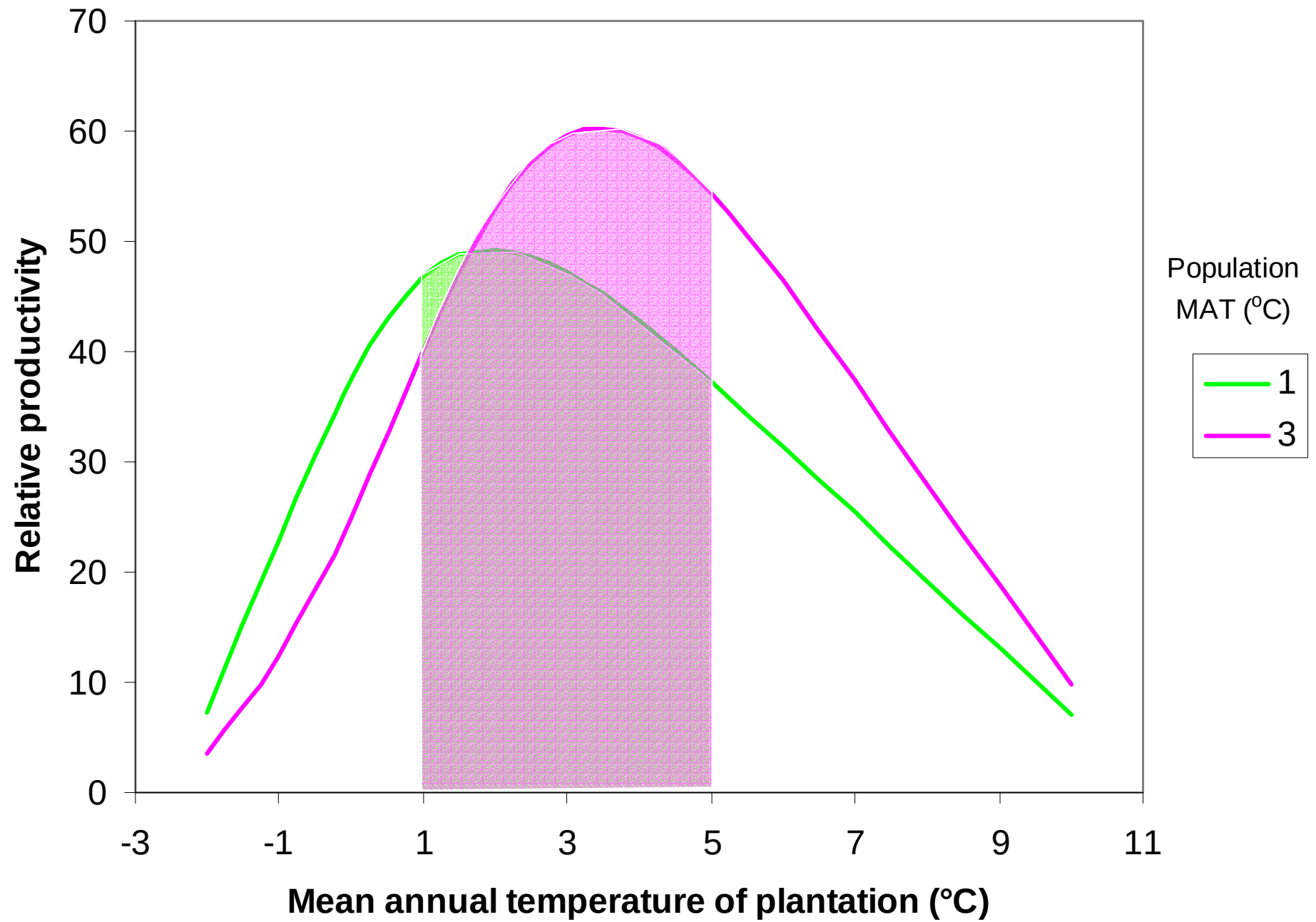






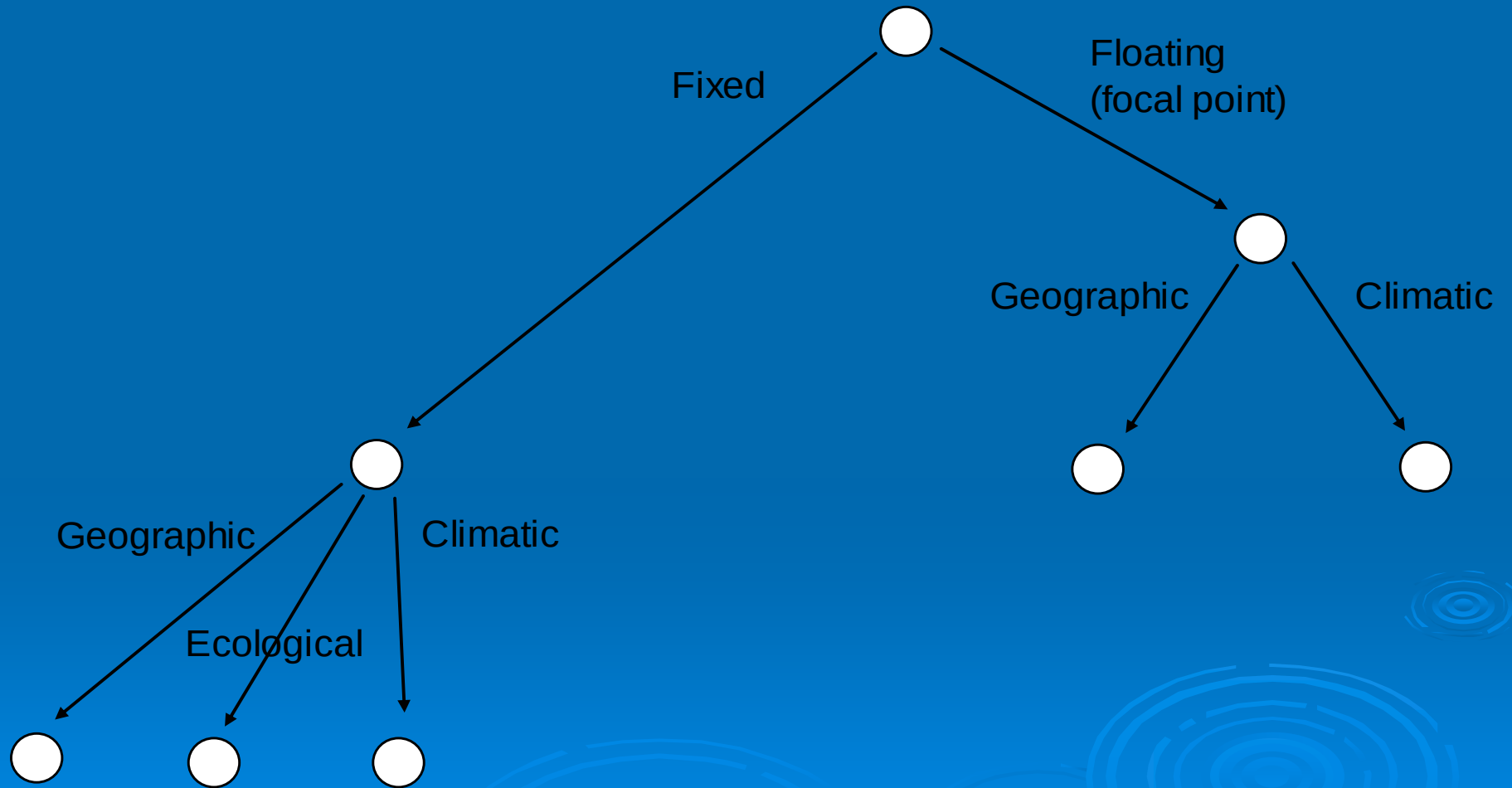




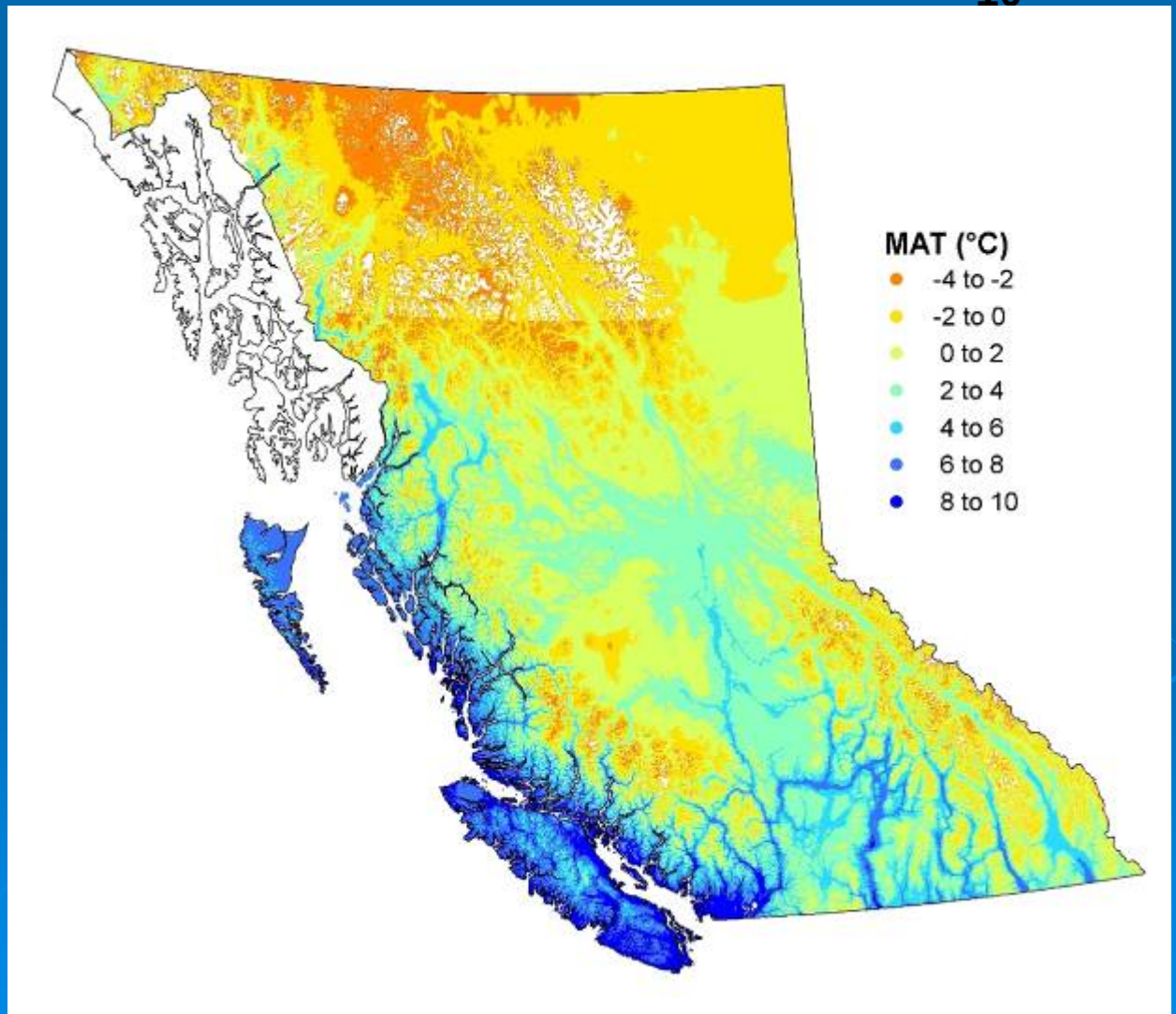
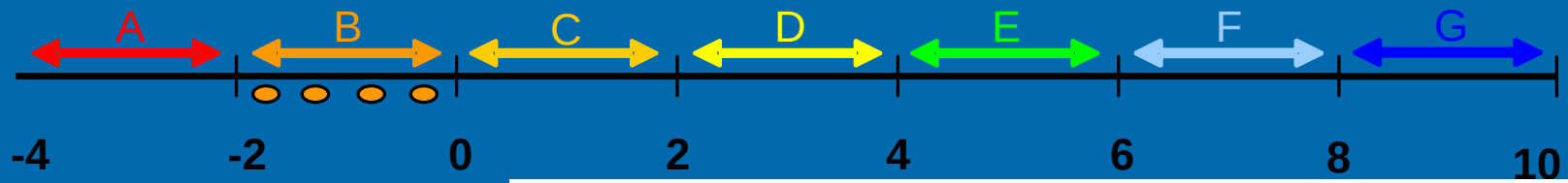


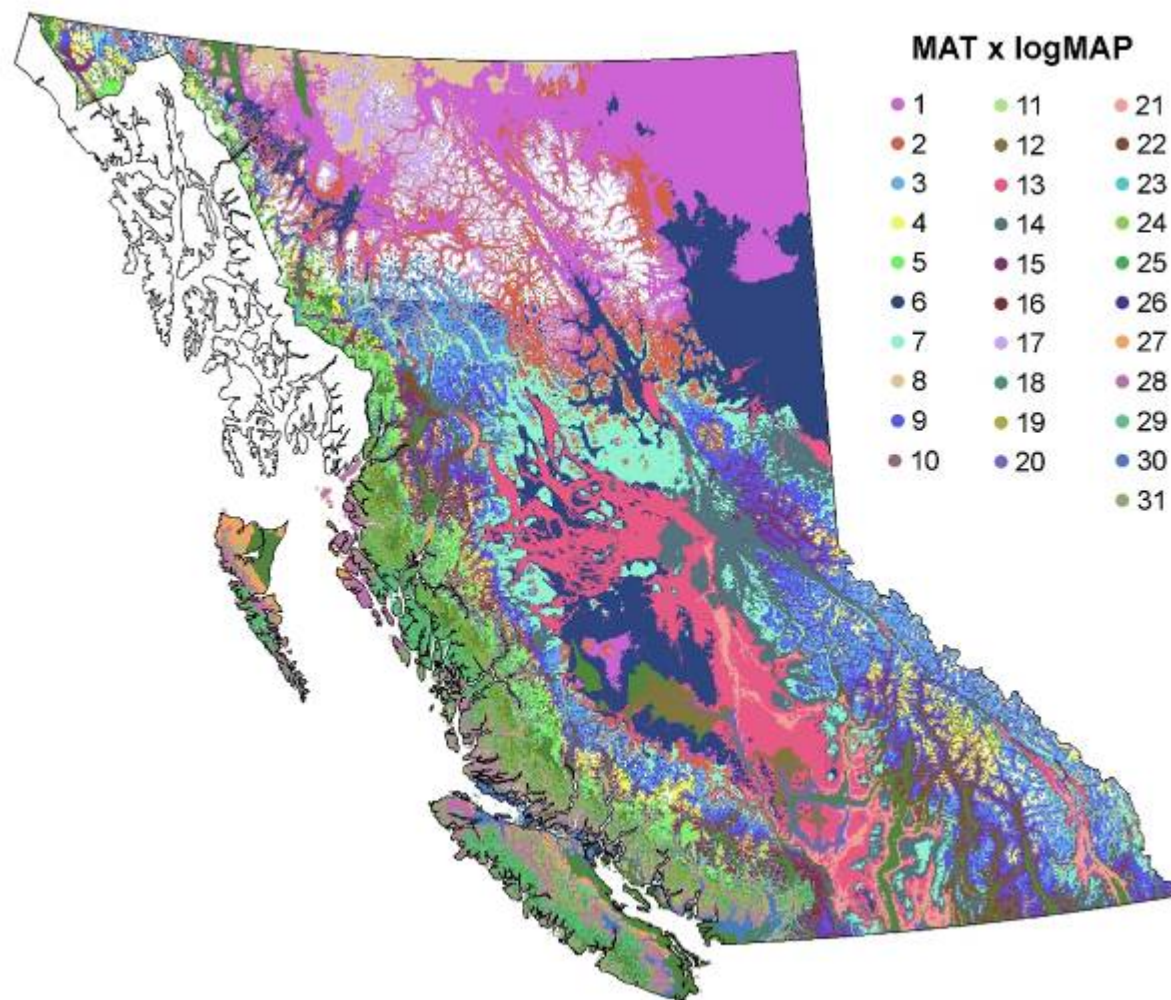
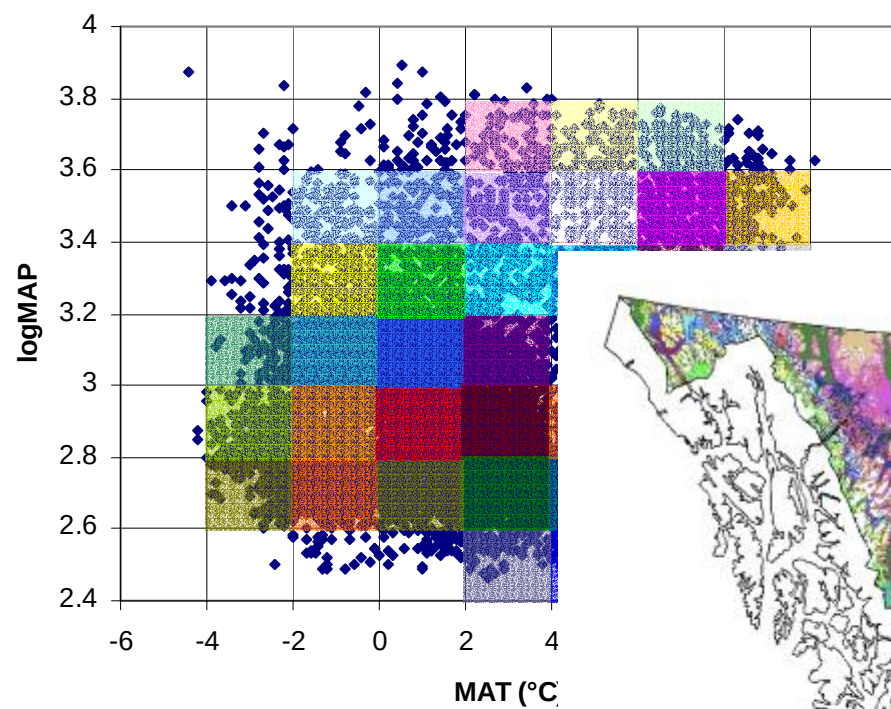


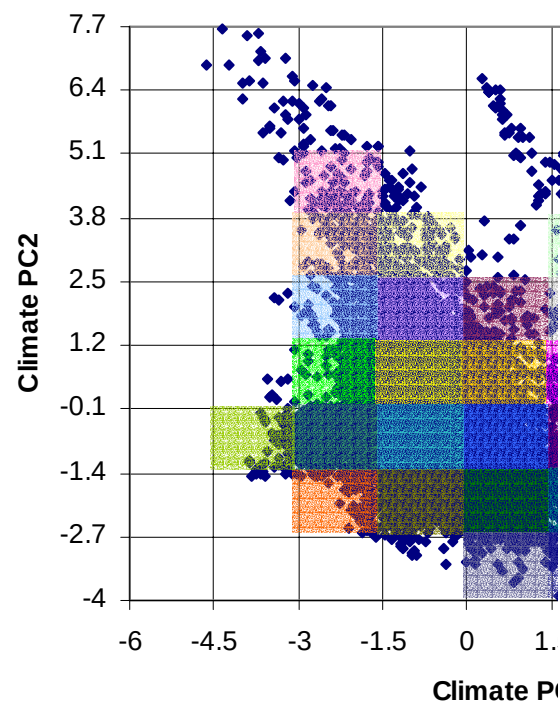
Seed Transfer Systems



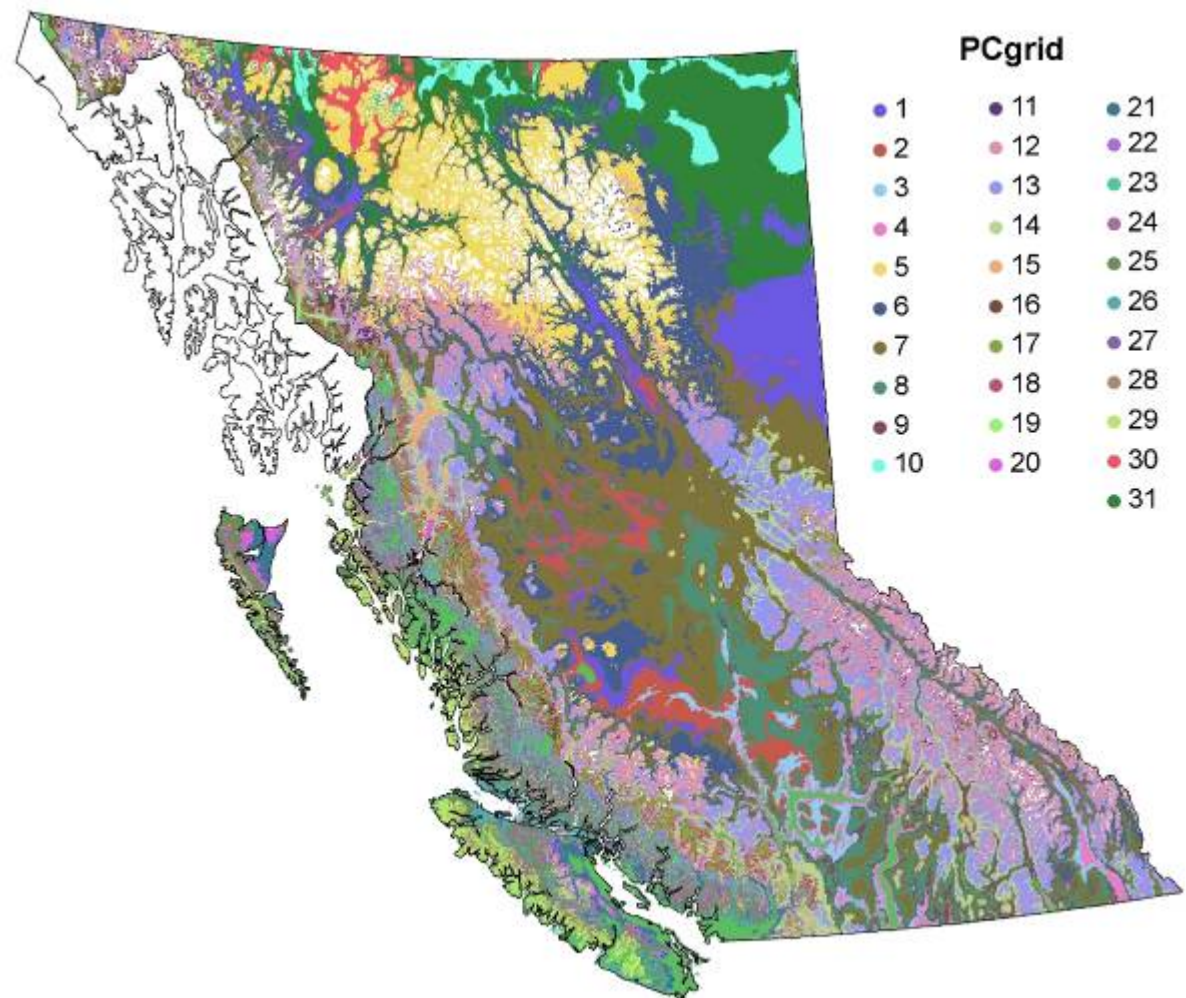
MAT Seed Zones

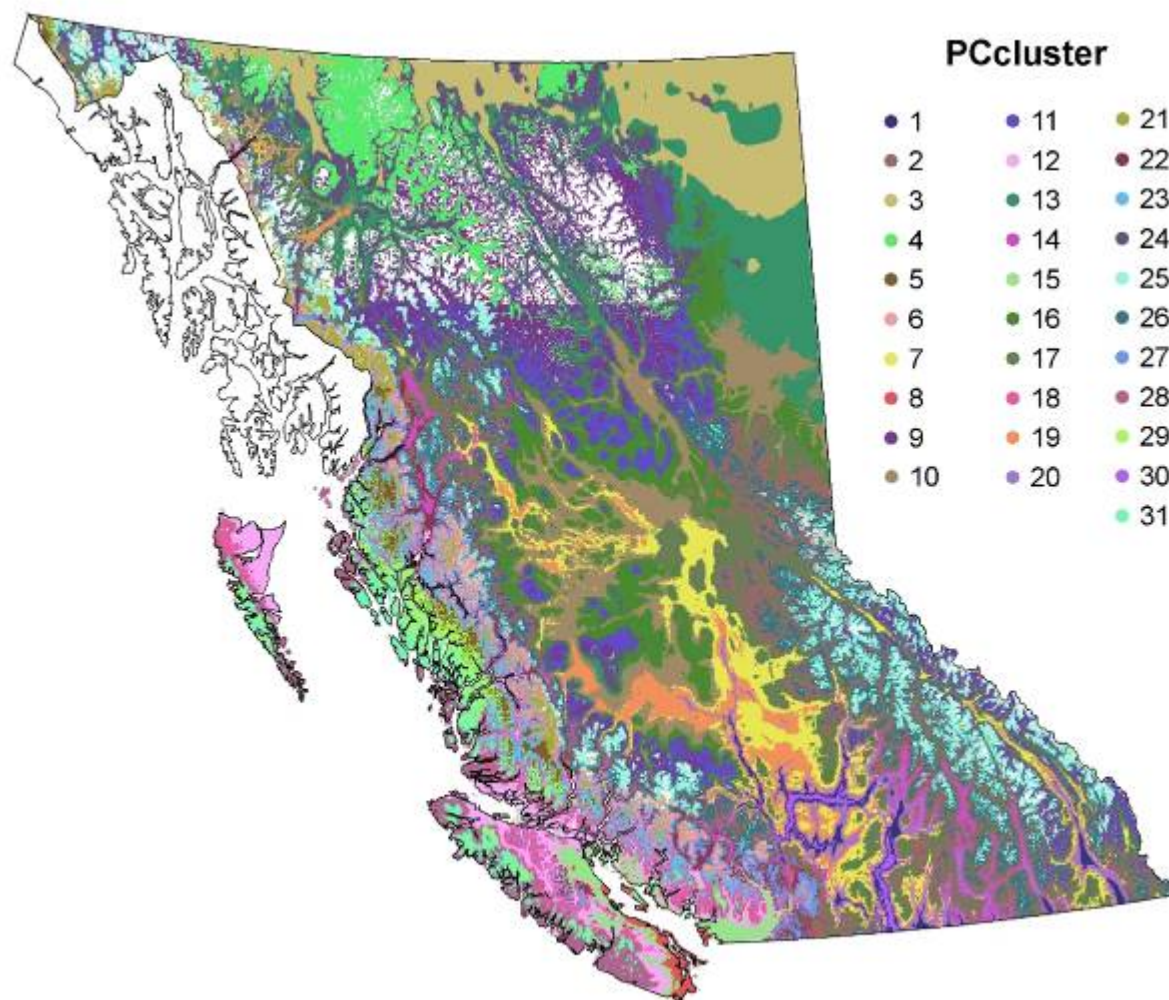
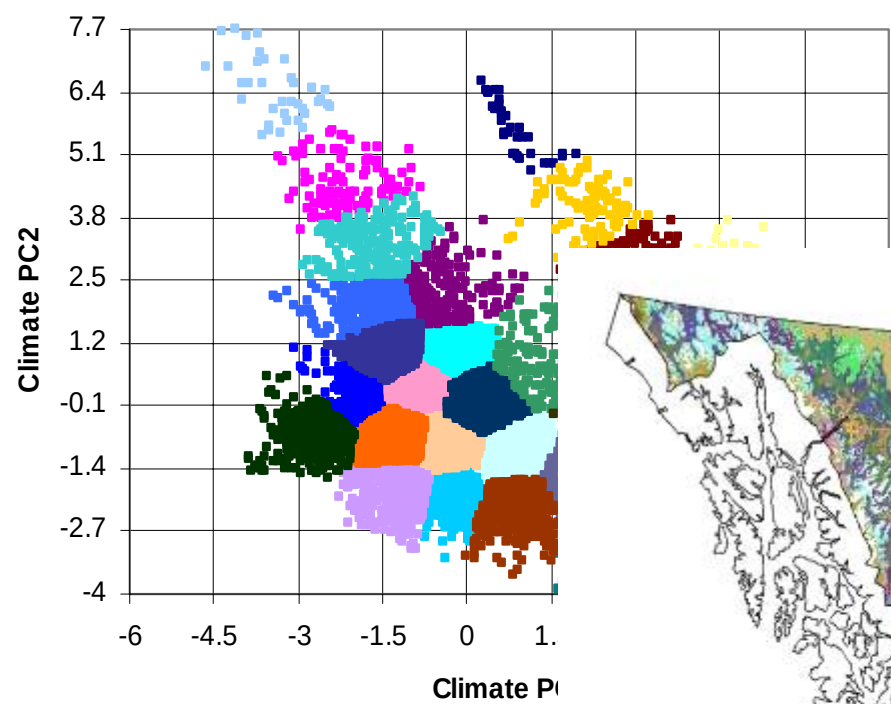


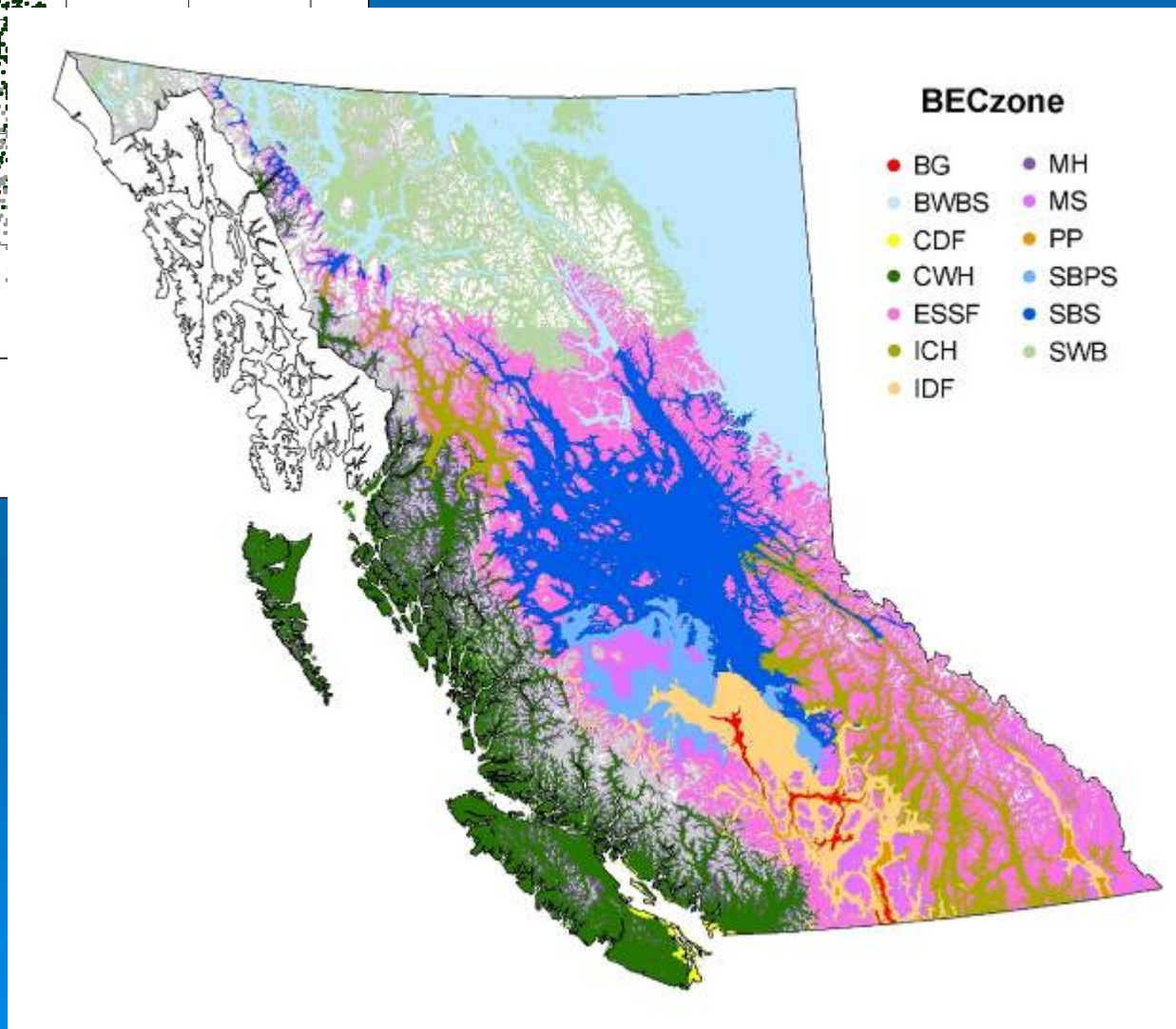
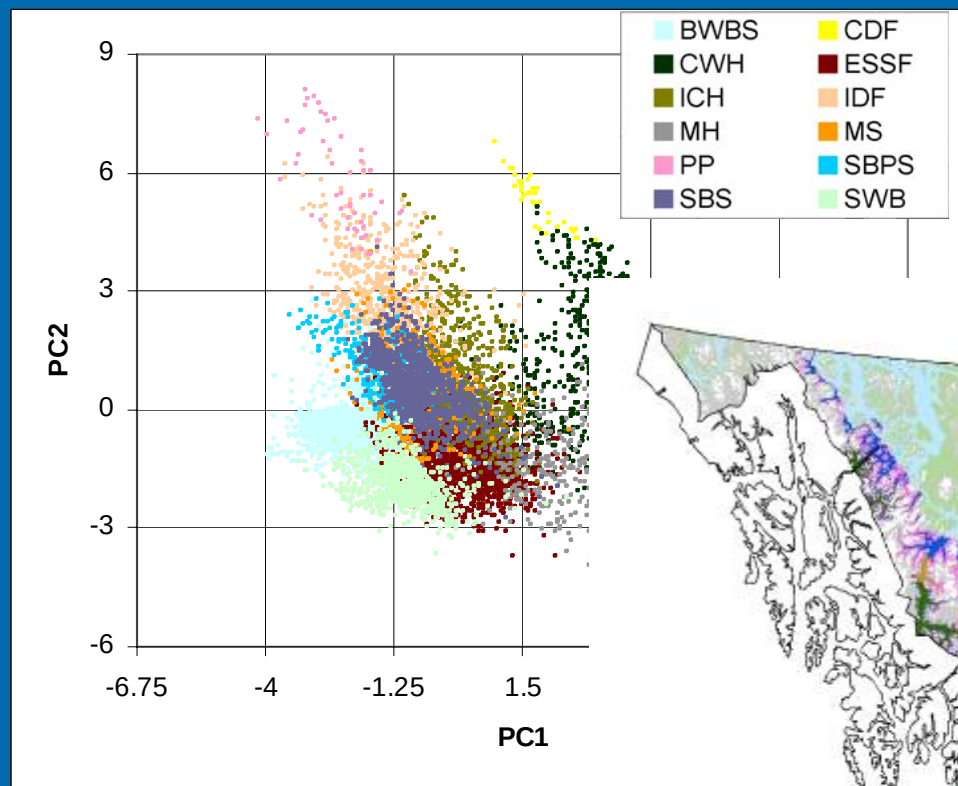


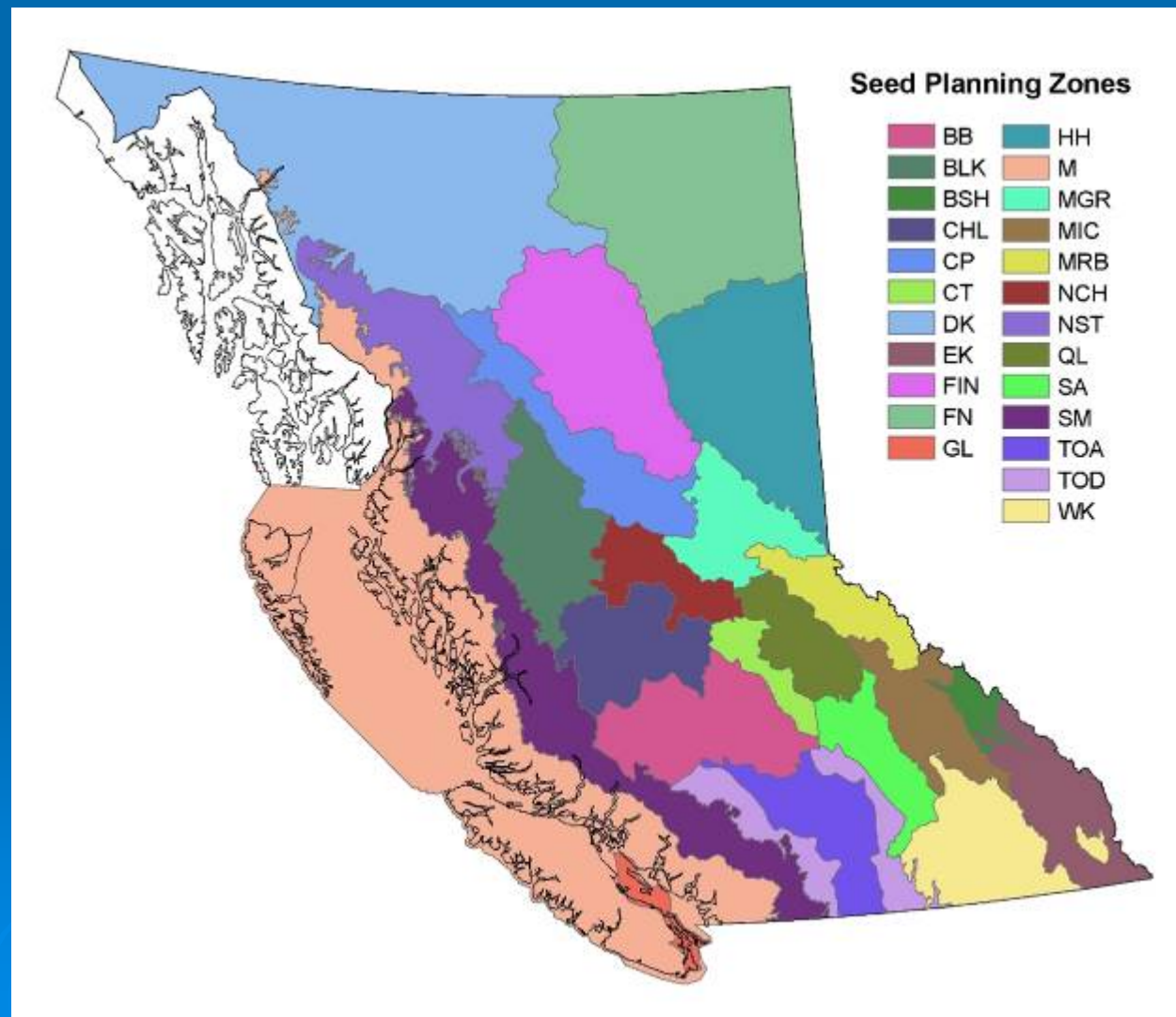


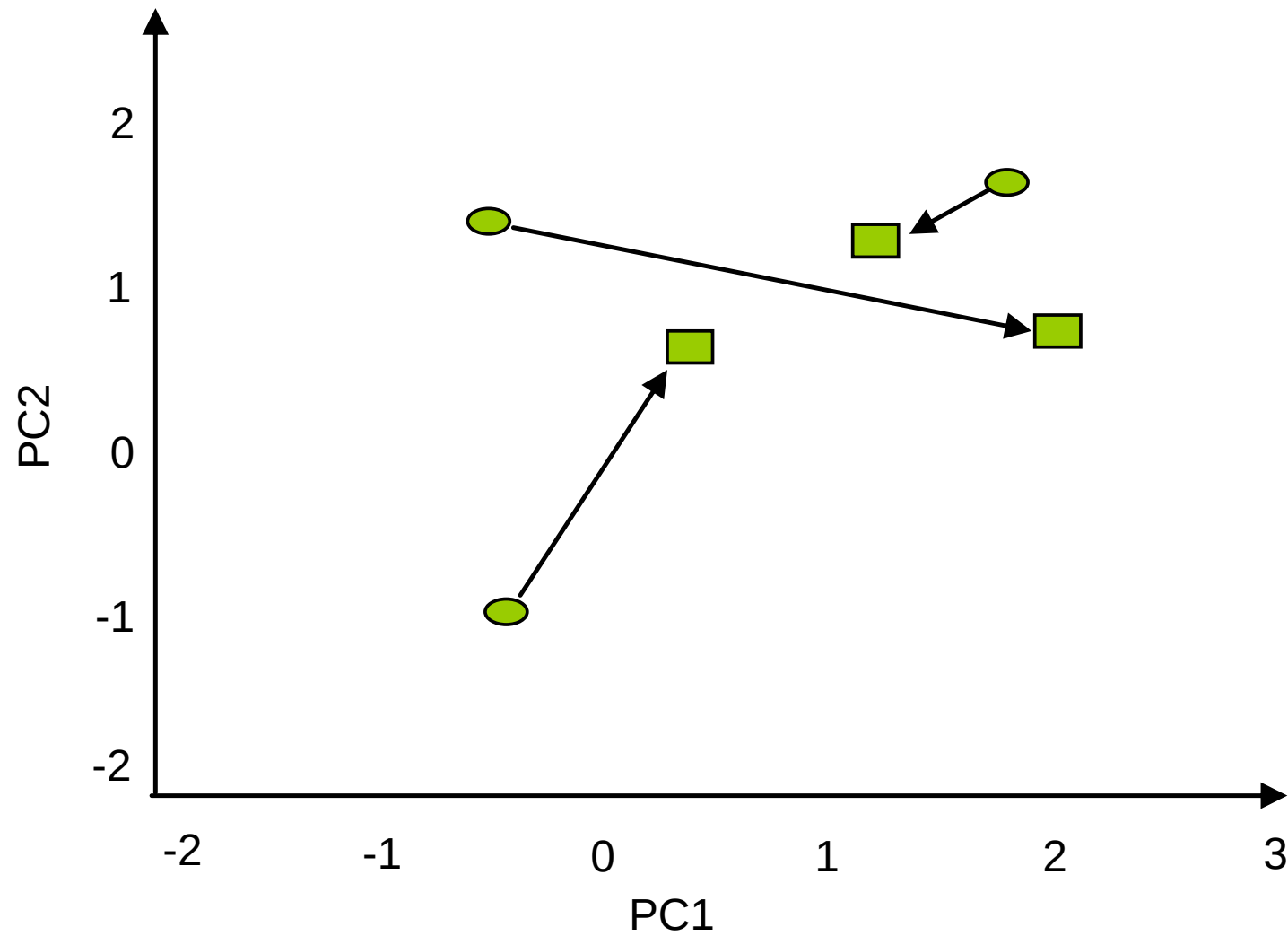
Mean Annual Temp
 Degree Days > 5 °C
 Mean Cold Month Temp
 Continentality
 Mean Annual Precip
 Mean Summer Precip
 Annual Drought Index
 Summer Drought Index

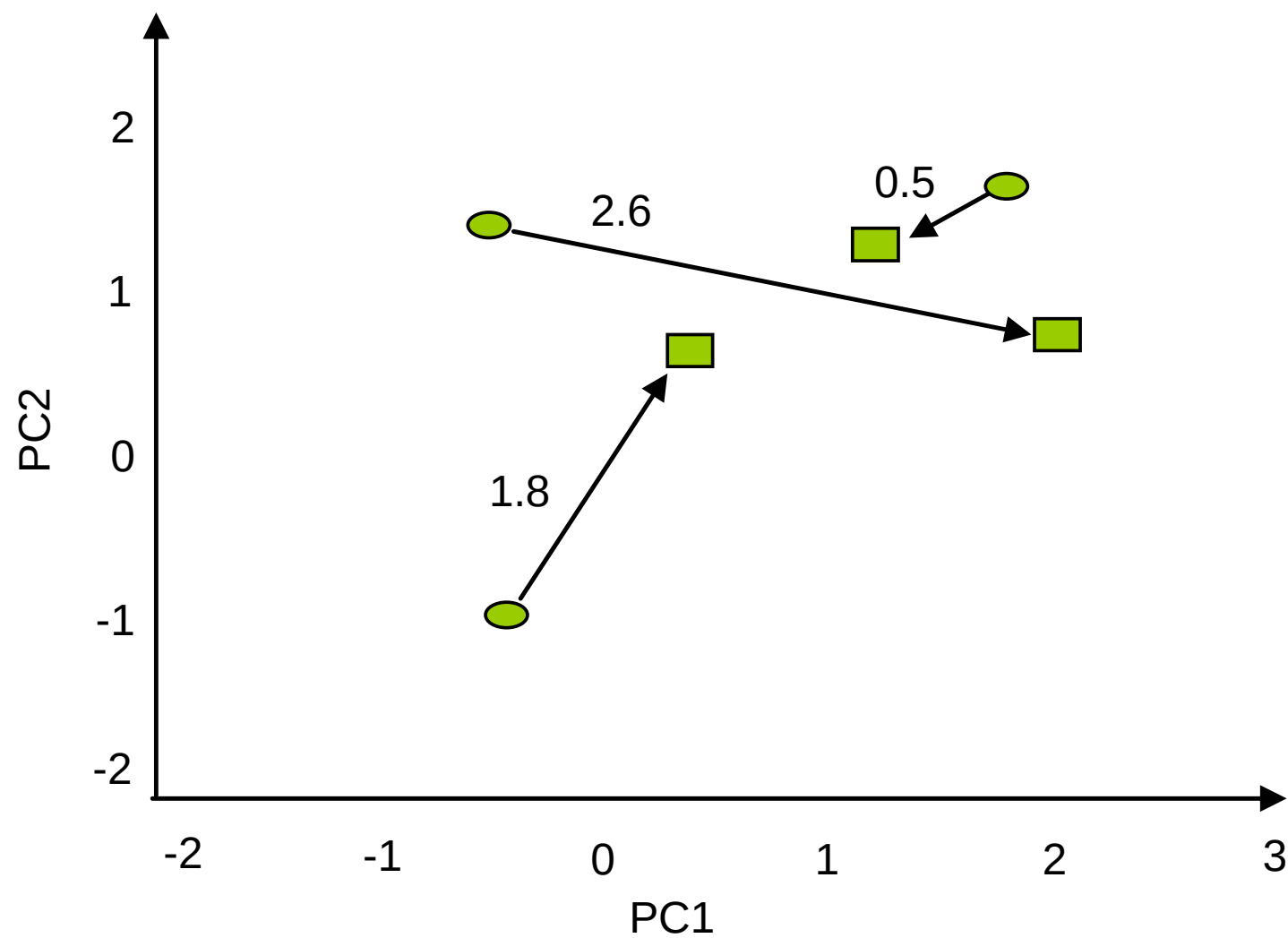


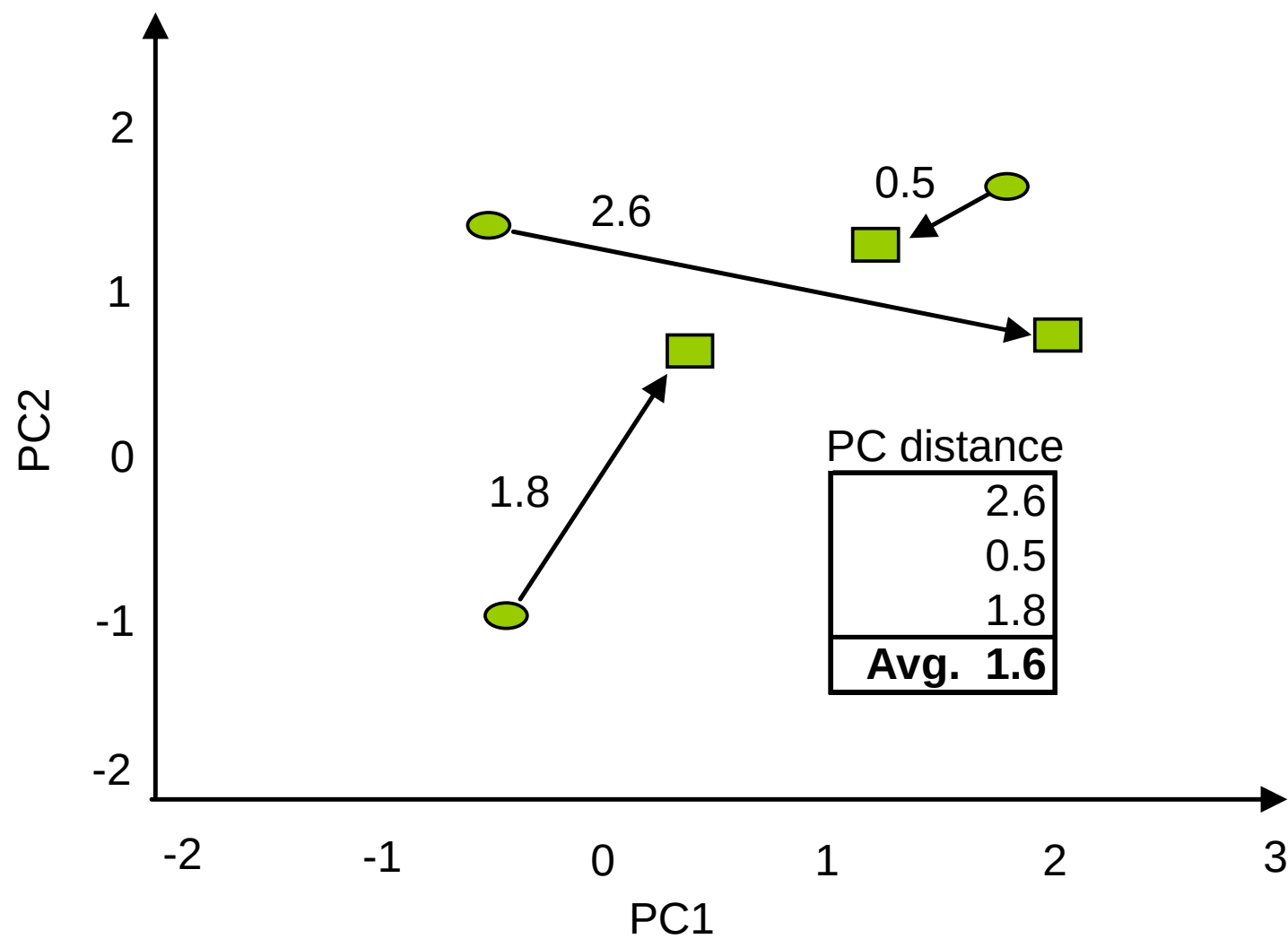




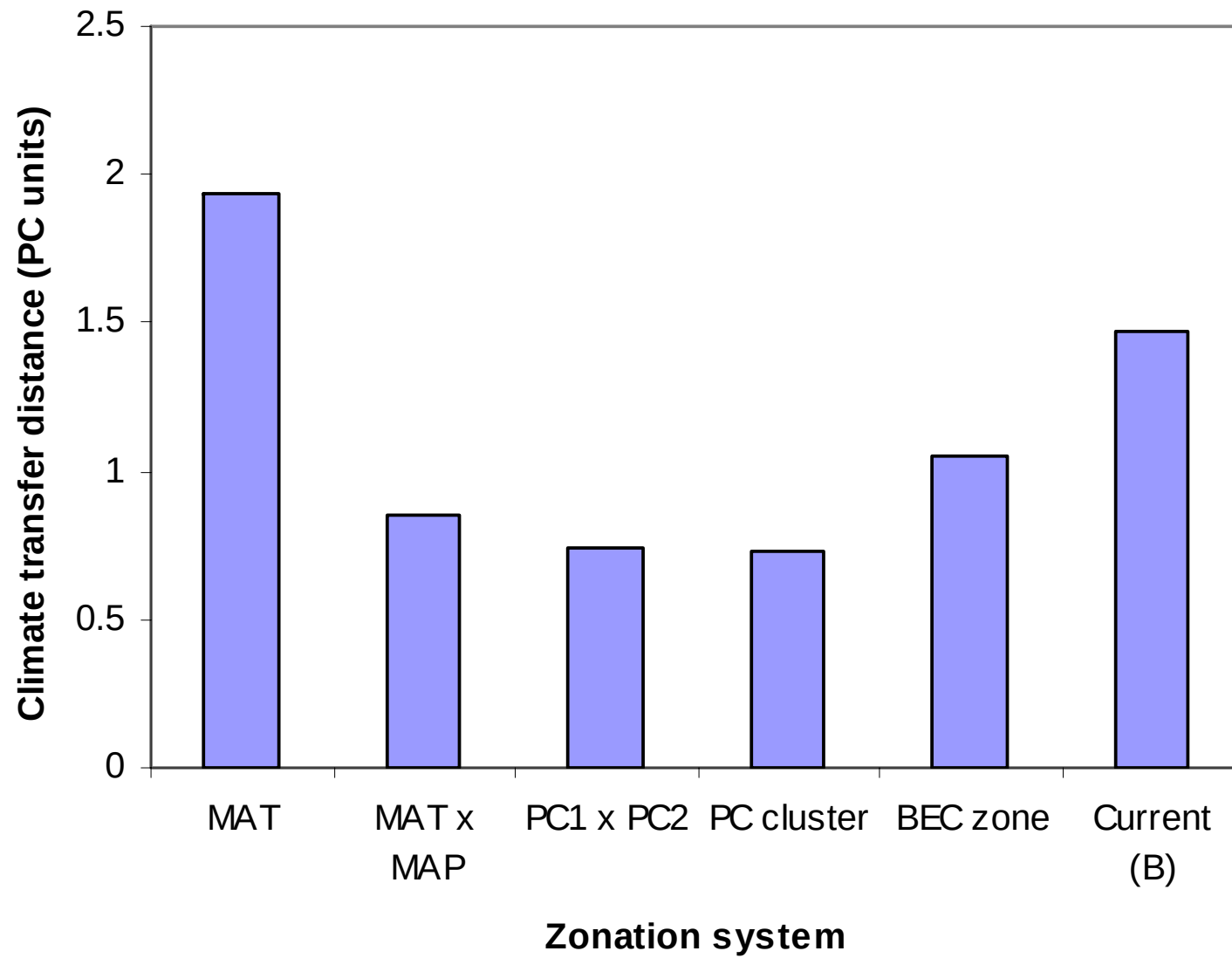






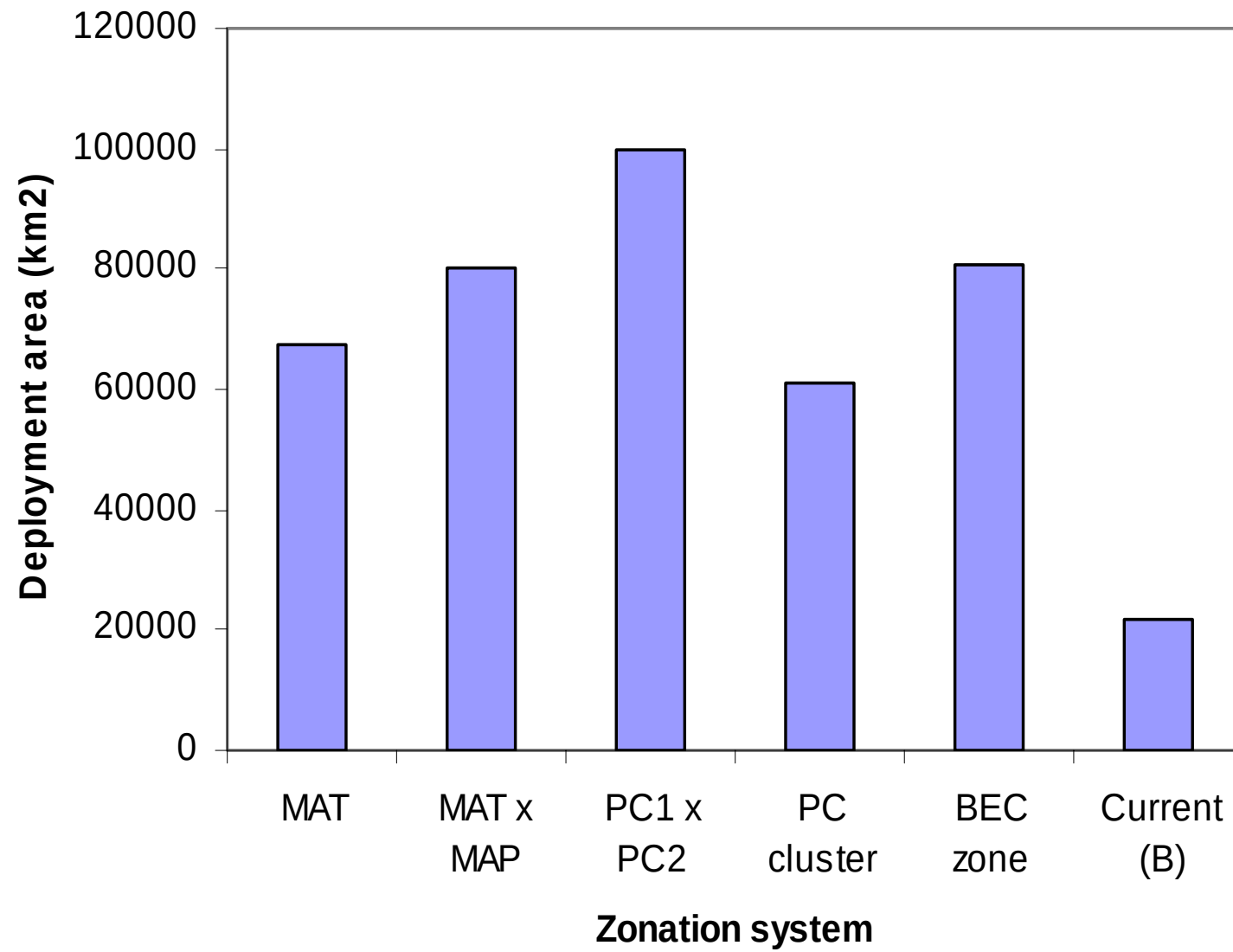


All species
12 Zones

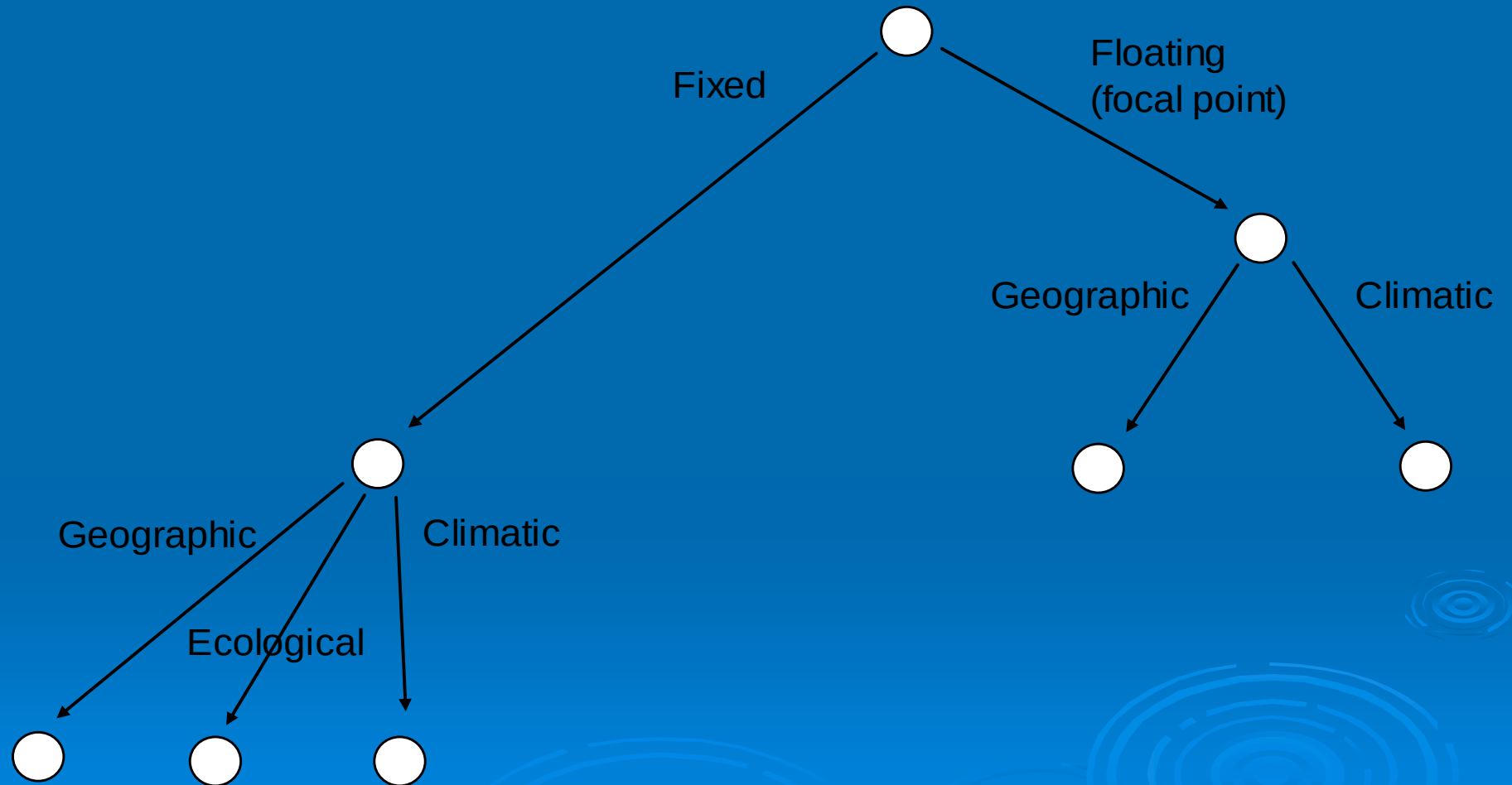


All species

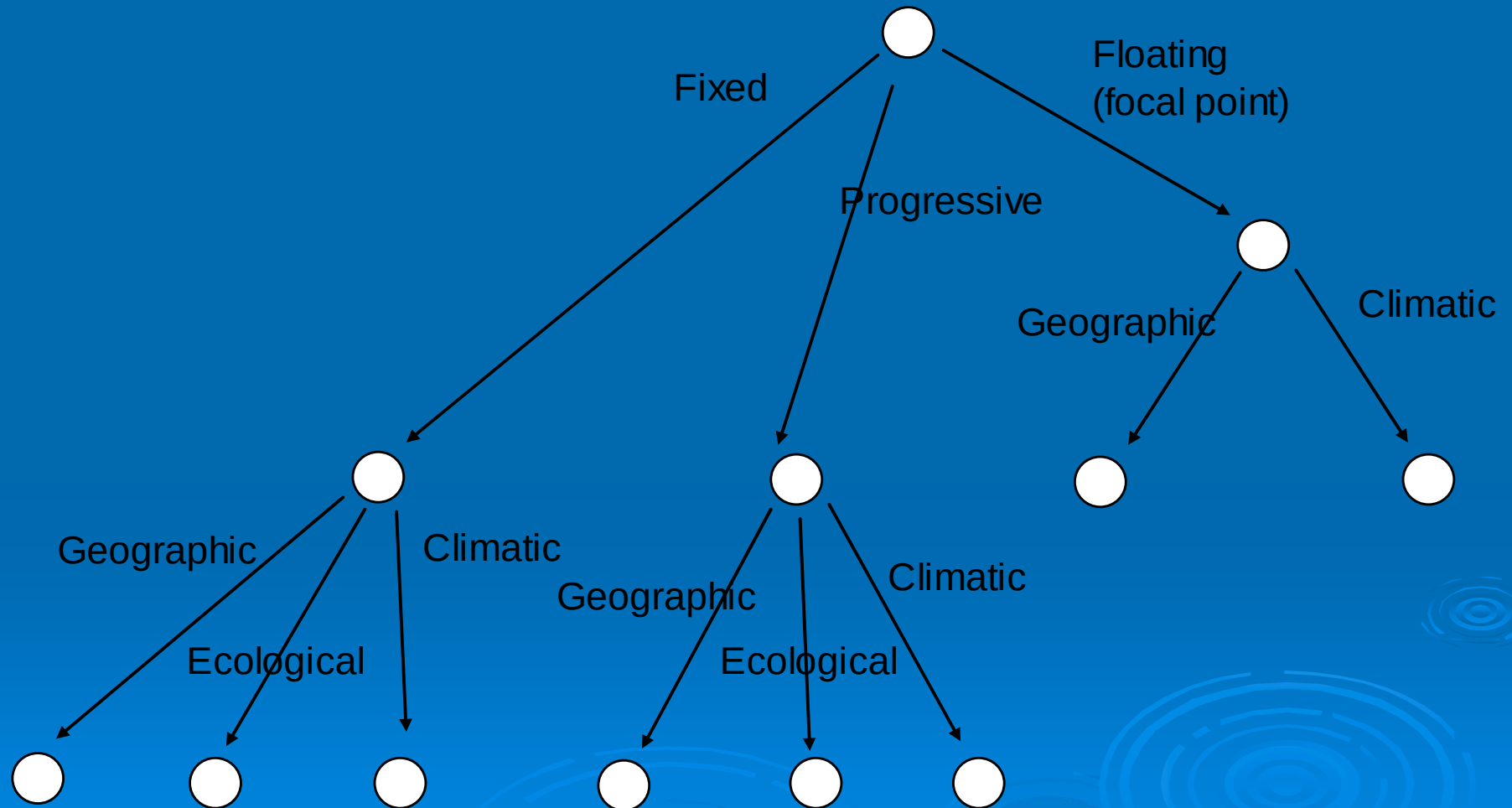
12 Zones

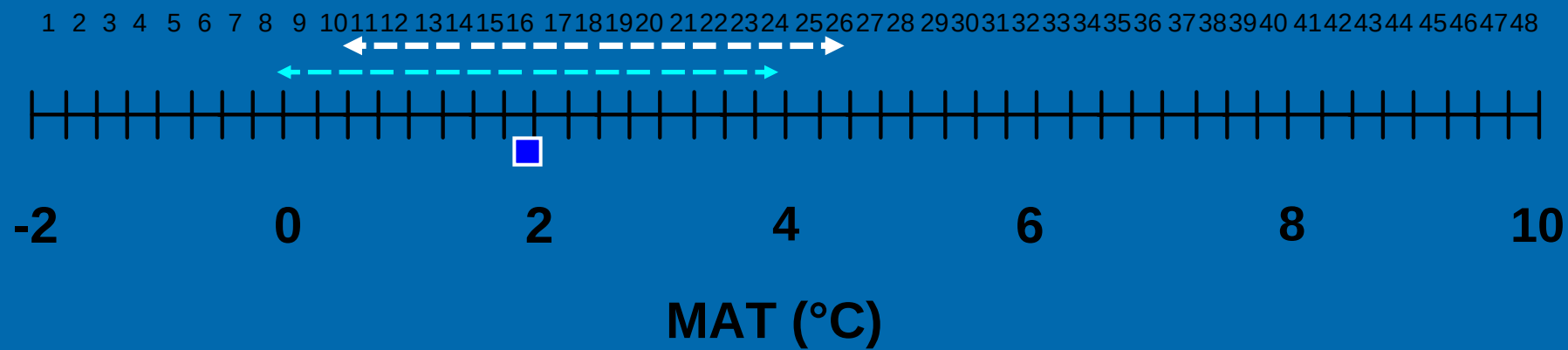


Seed Transfer Systems

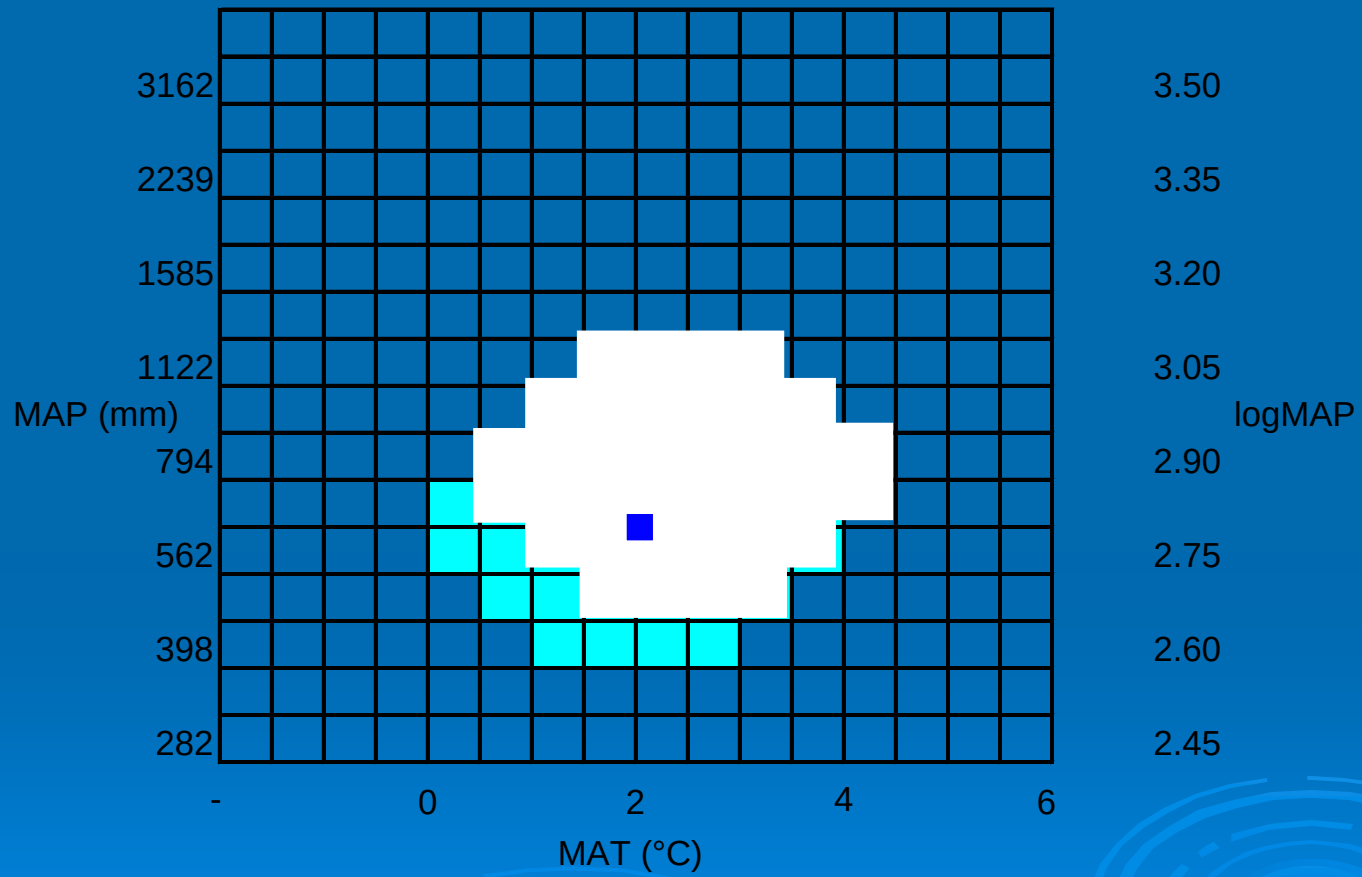


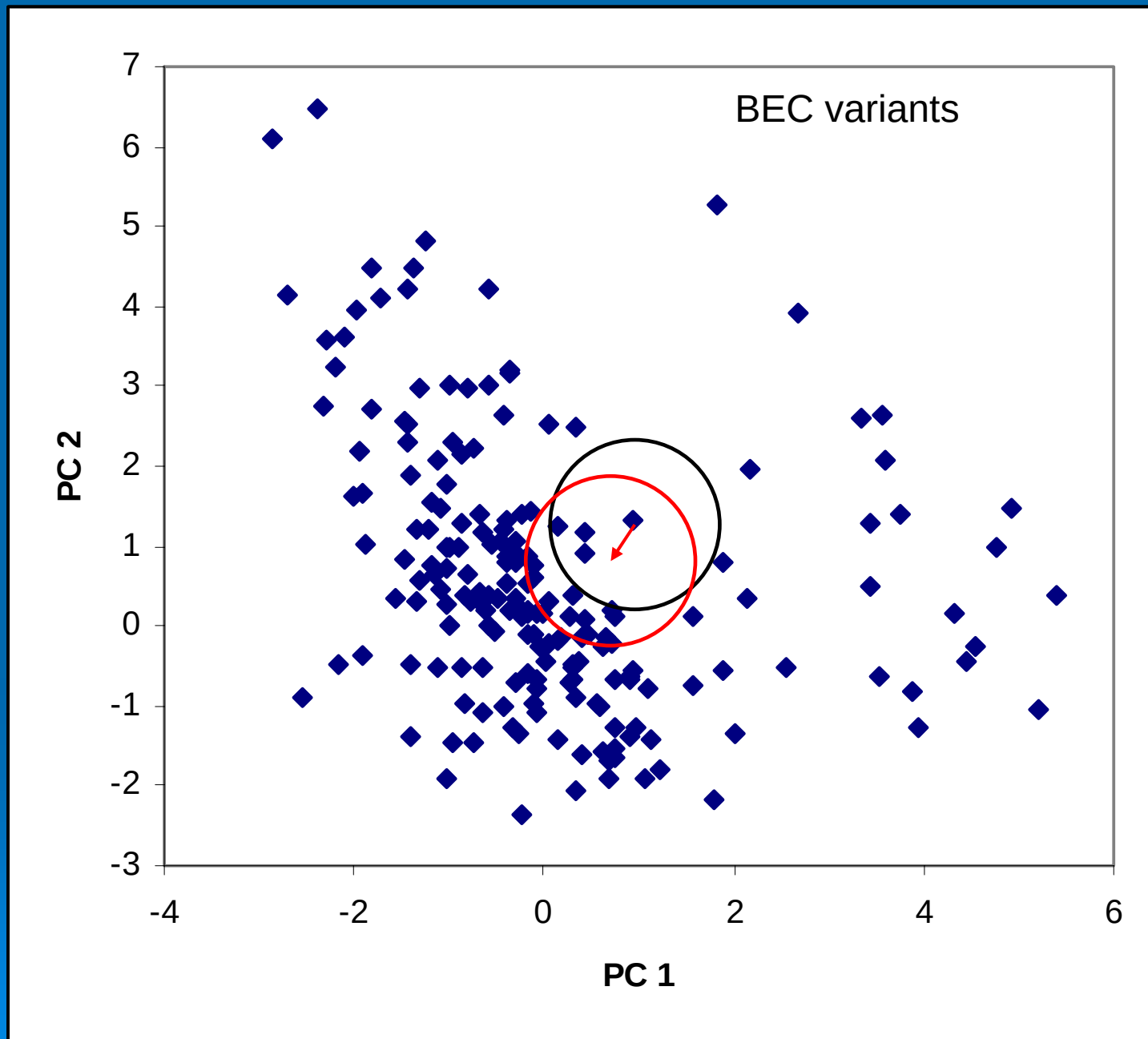
Seed Transfer Systems





Progressive Seed Zones - 2 climate variables





➤ Evaluation Criteria

- Minimize maladaptation
- Maximize deployability
- Ease of implementation and use
- Accommodate assisted migration

➤ Summary

- New ST system will reduce maladaptation, increase seed deployability and allow for assisted migration
- Fixed zones systems have poorer deployability than floating systems
- Progressive systems – good deployability and easy to use

Acknowledgements



Photo: Nick Wheeler

➤ Data

- Nick Ukrainetz
- Doug Ashbee
- Barry Jaquish

➤ Discussions

- Sally Aitken
- Andreas Hamann
- Tongli Wang
- Jack Woods
- Alvin Yanchuk

➤ Maps

- Nick Ukrainetz