Department of Primary Industries
and Regional Development

Climate Vulnerability Assessment

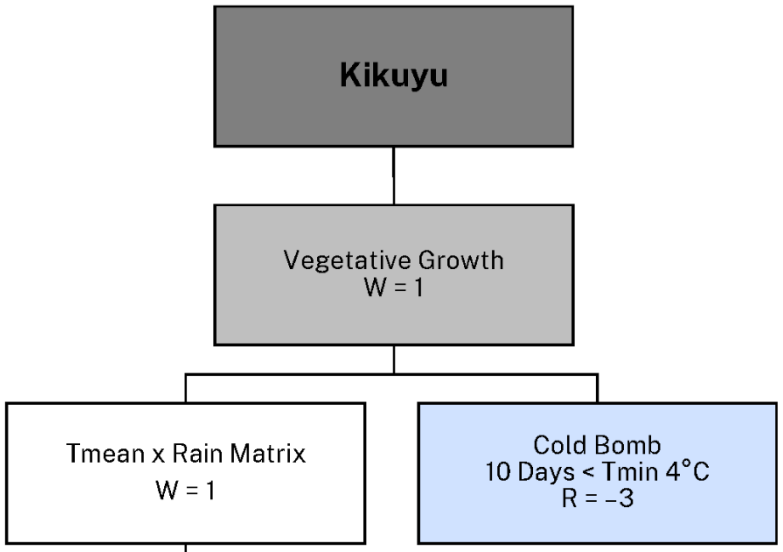
Dairy Pastures Results Report Appendix

NSW GOVERNMENT

Dairy Pastures Results Report Appendix

Figure A1: Kikuyu MCA model structure.

MCA model hierarchical structure and model components for kikuyu pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)			
		< 8	8 to 16	16 to 20	> 20
Cumulative Rainfall (mm) 3 months	< 150	0	0	0	0
	150 to 200	0	0.3	0.7	0.8
	> 200	0	0.4	0.8	1

Figure A2: January climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

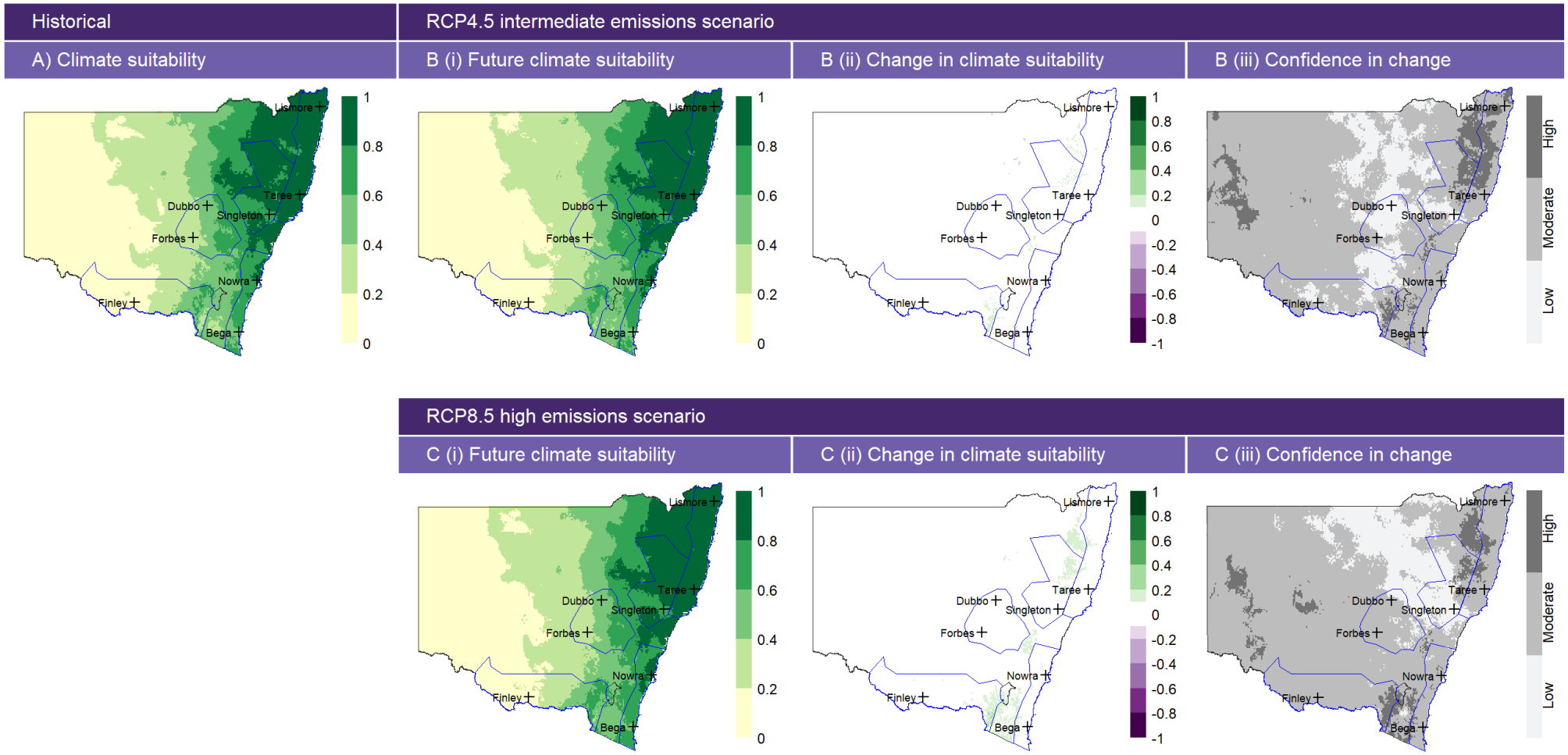


Figure A3: February climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

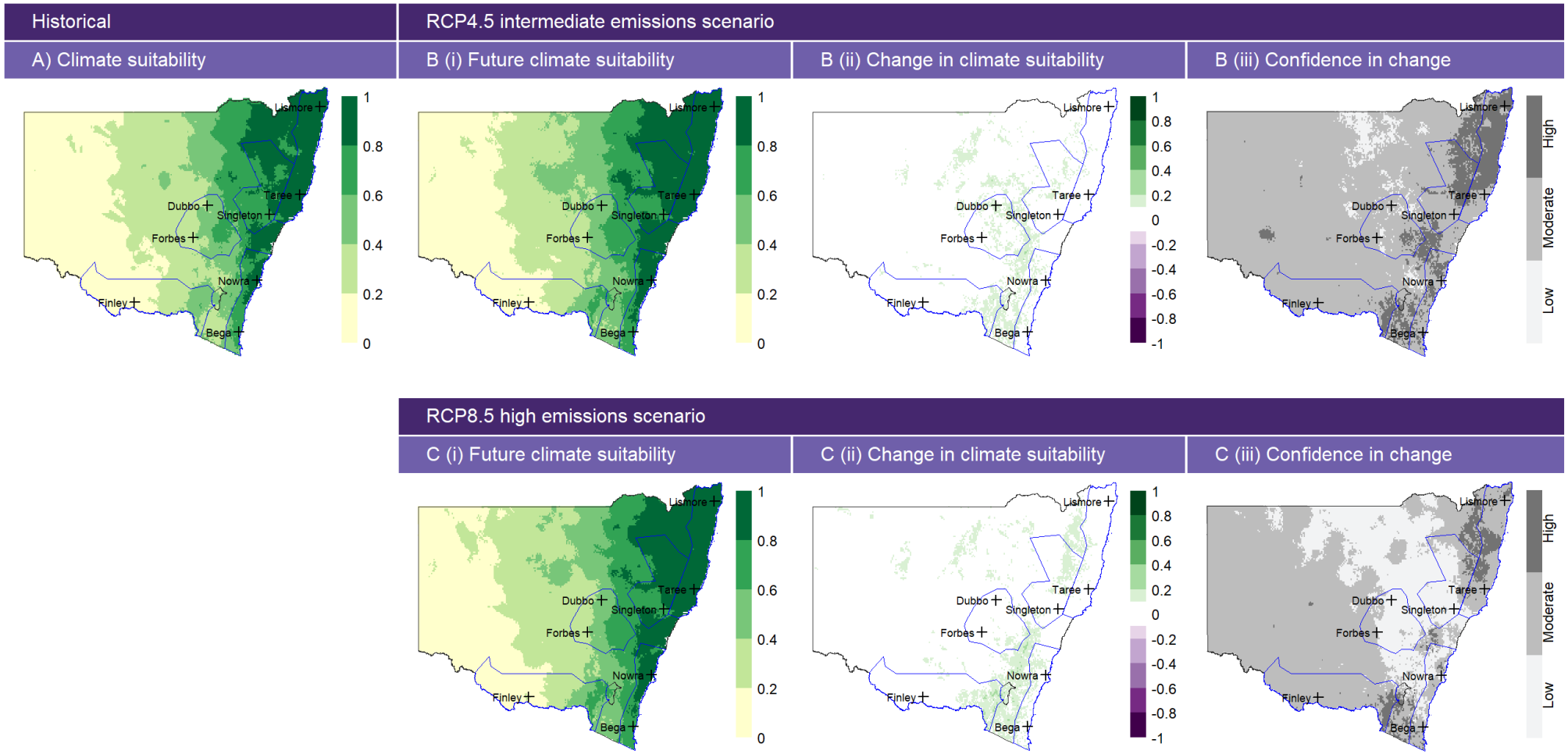


Figure A4: March climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

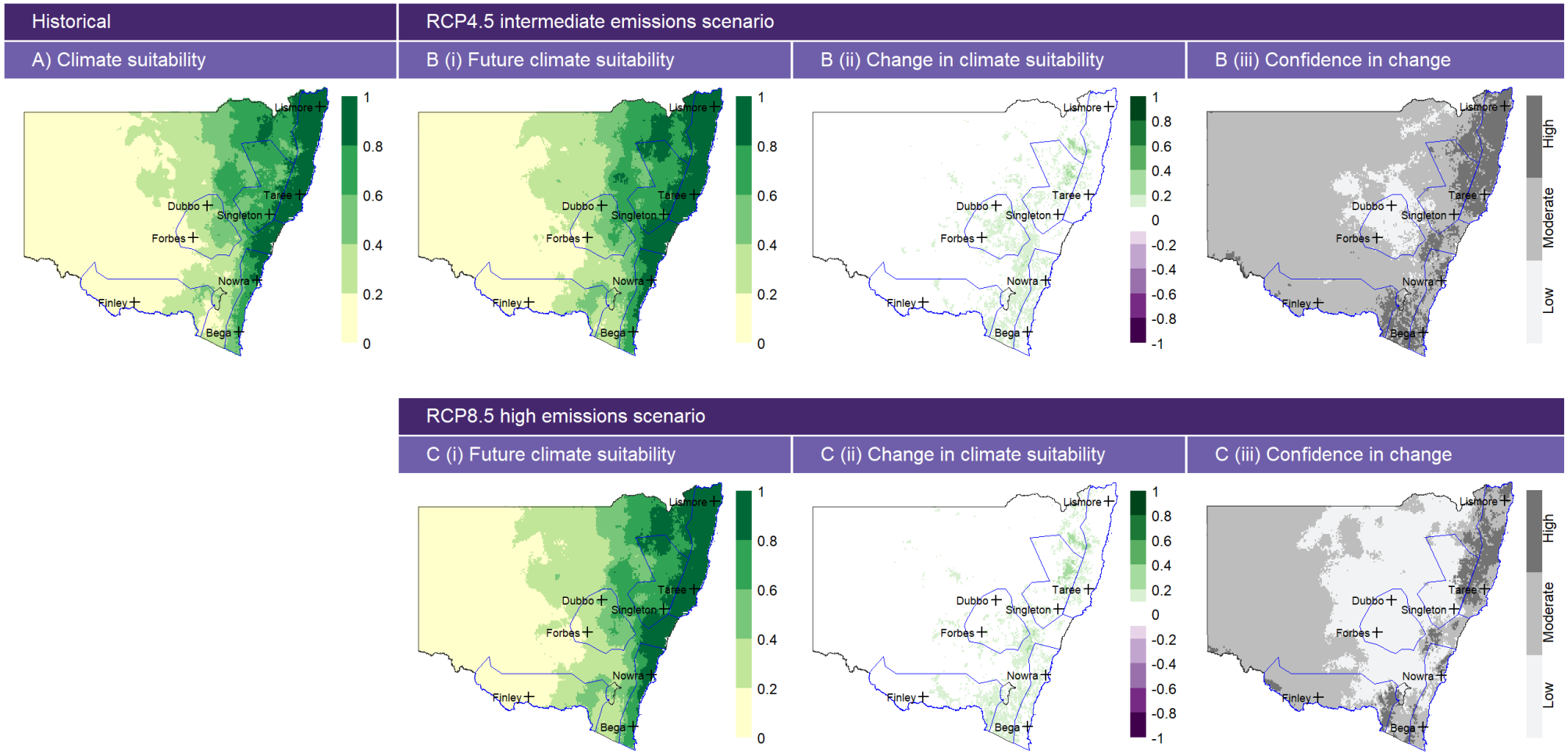


Figure A5: April climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

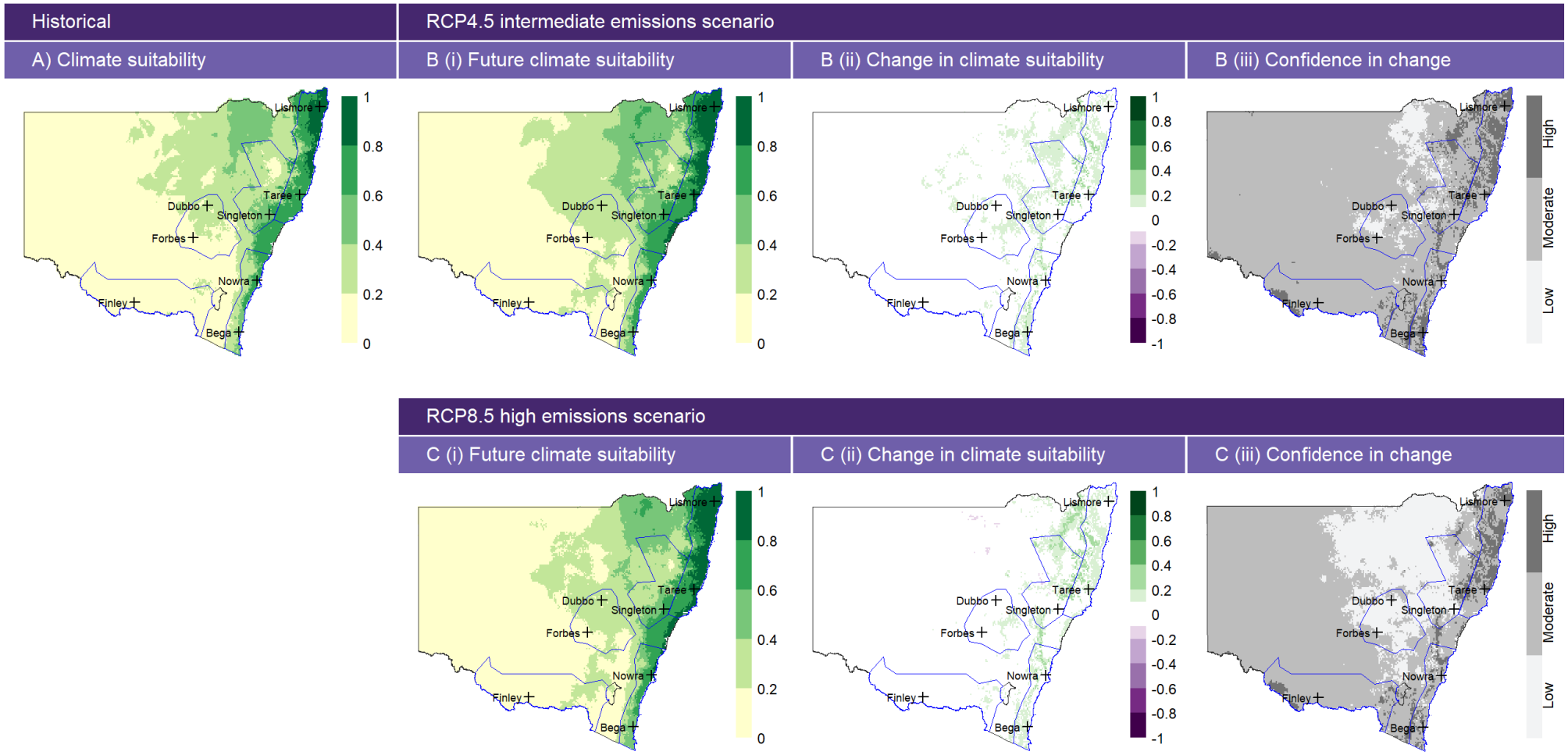


Figure A6: May climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

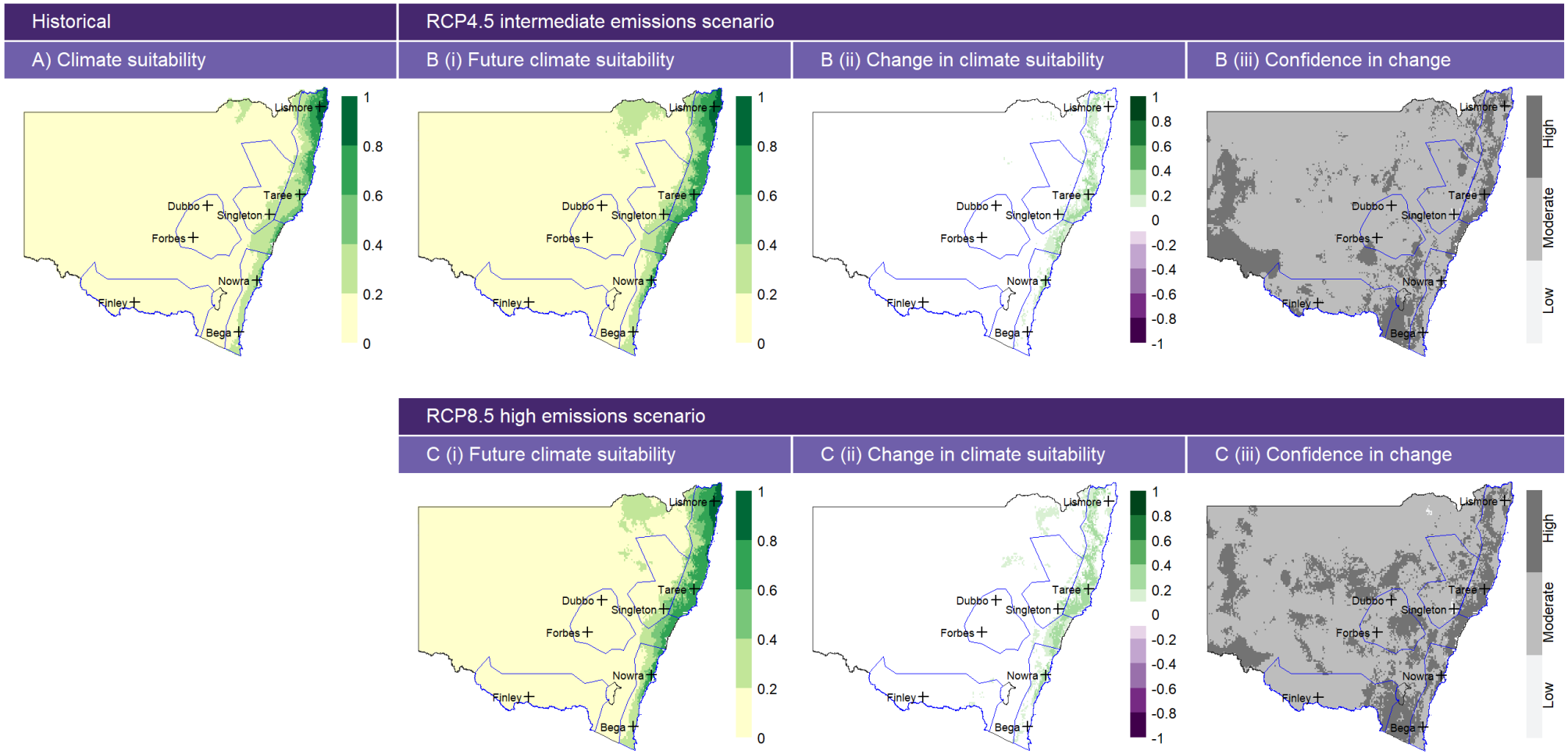


Figure A7: June climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

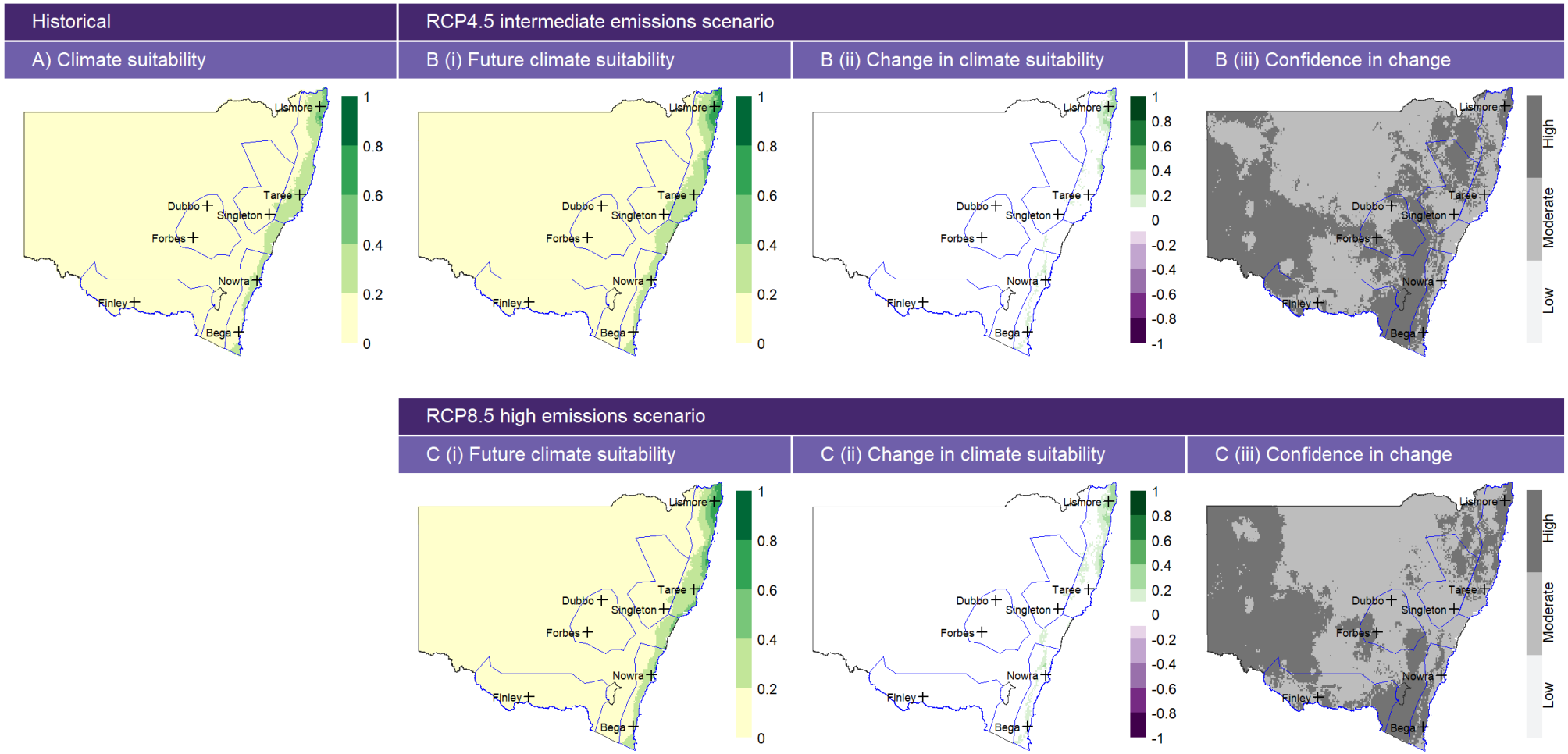


Figure A8: July climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

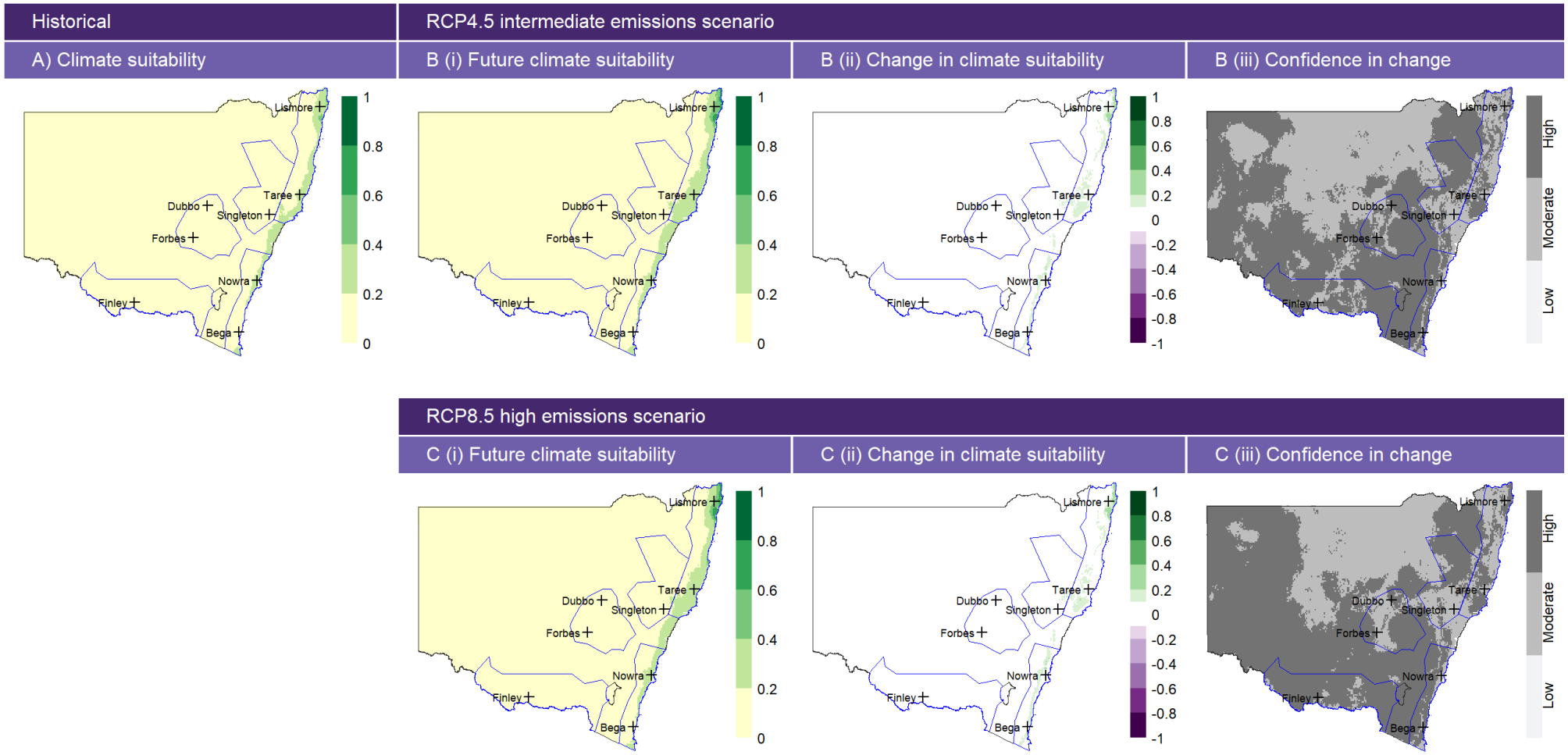


Figure A9: August climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

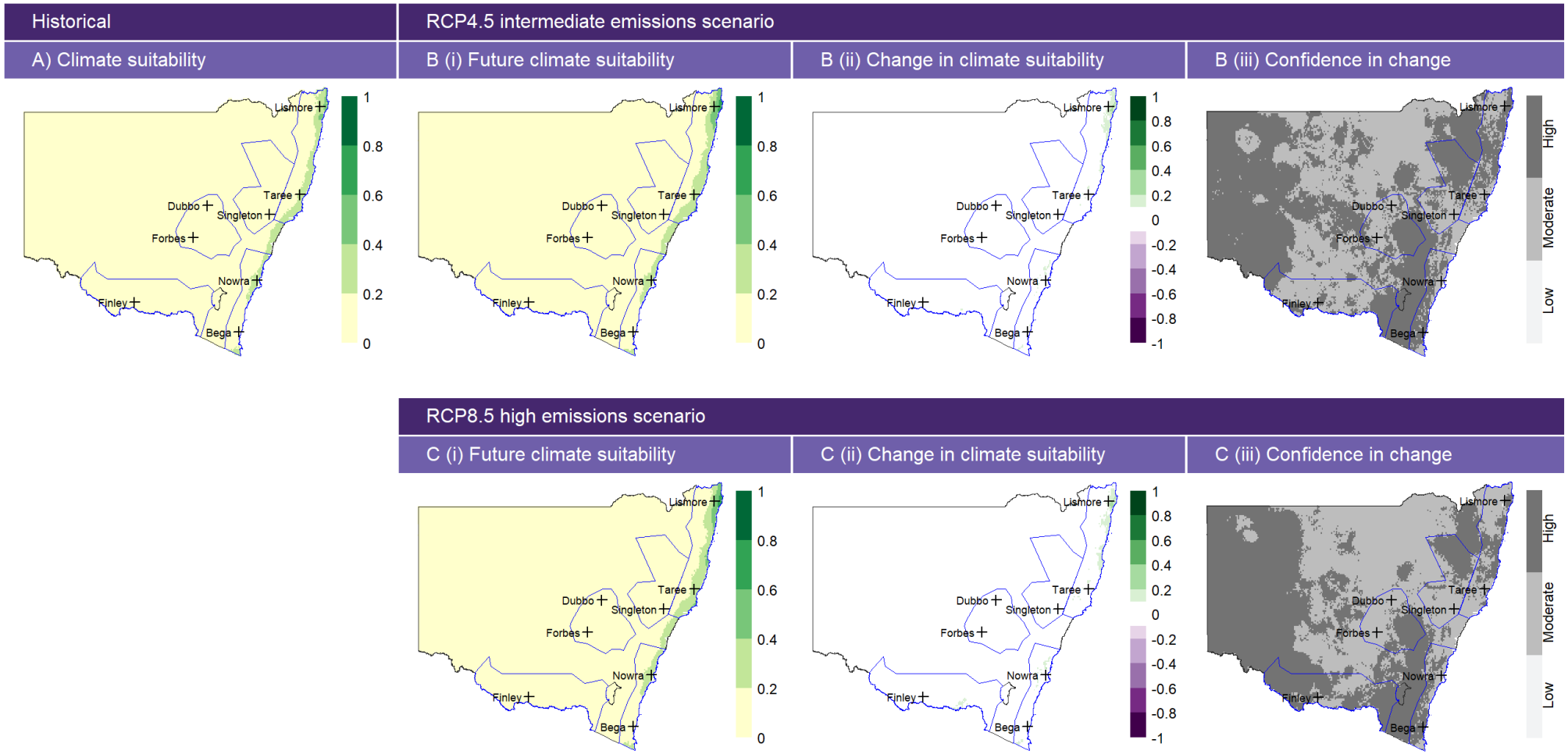


Figure A10: September climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

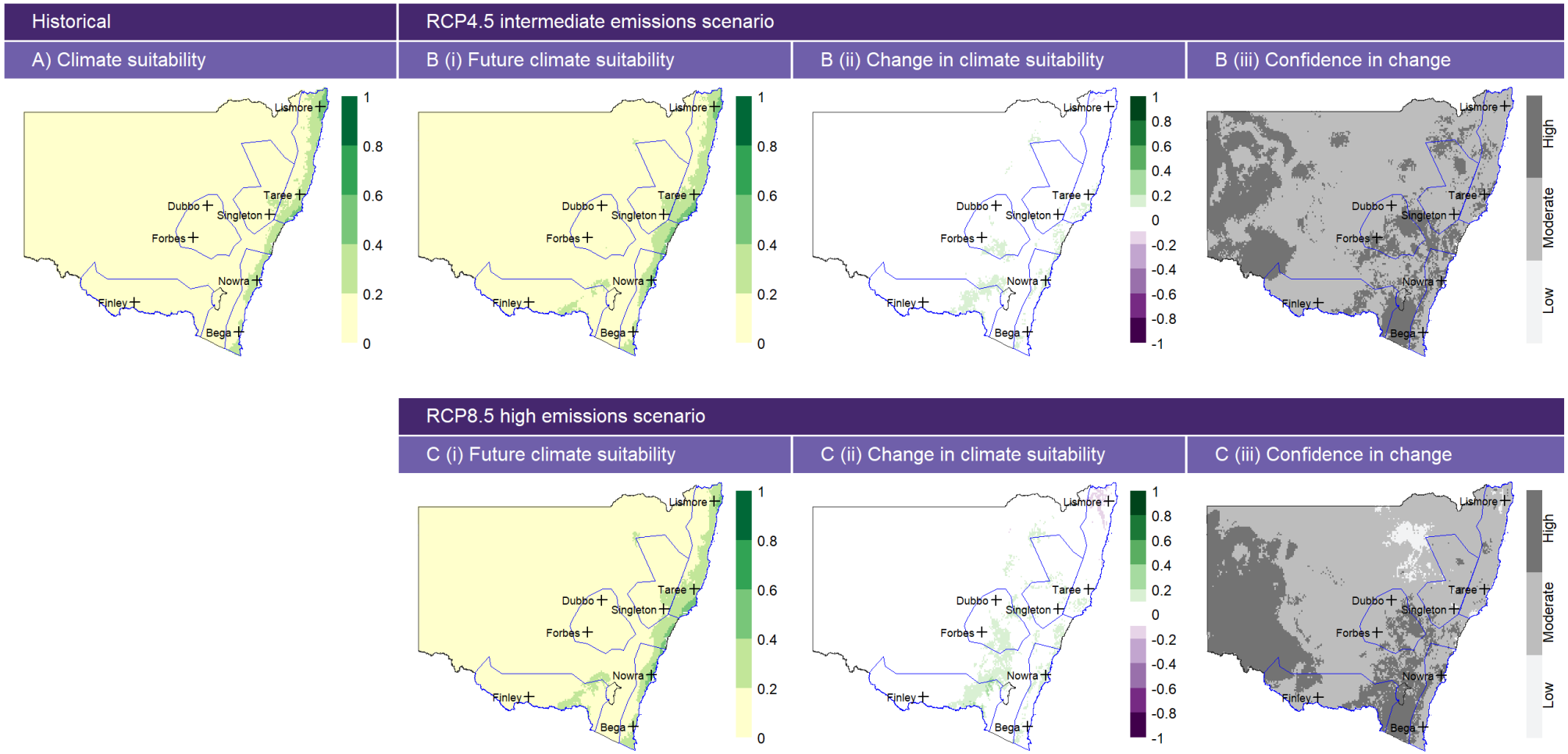


Figure A11: October climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

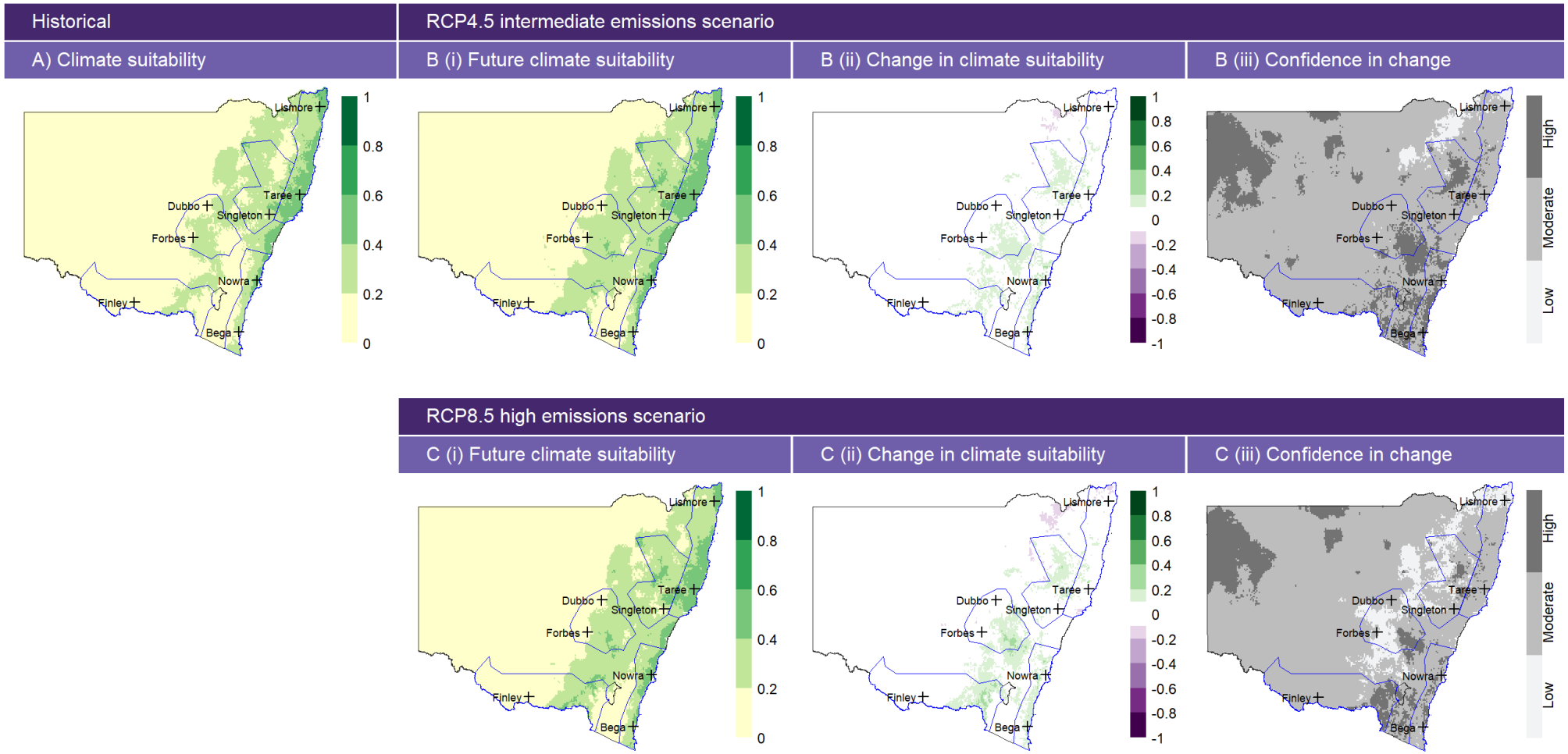


Figure A12: November climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

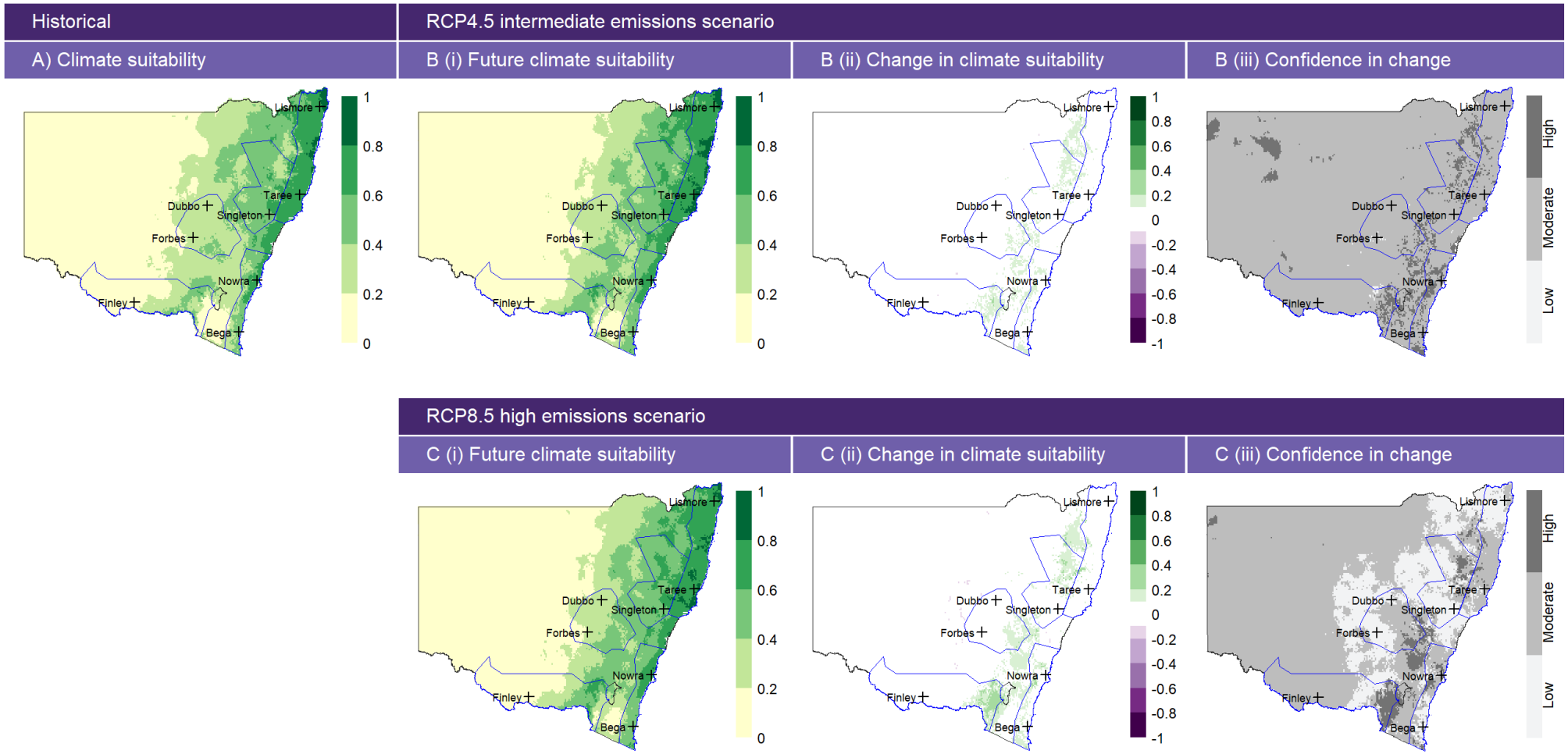


Figure A13: December climate suitability for kikuyu.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

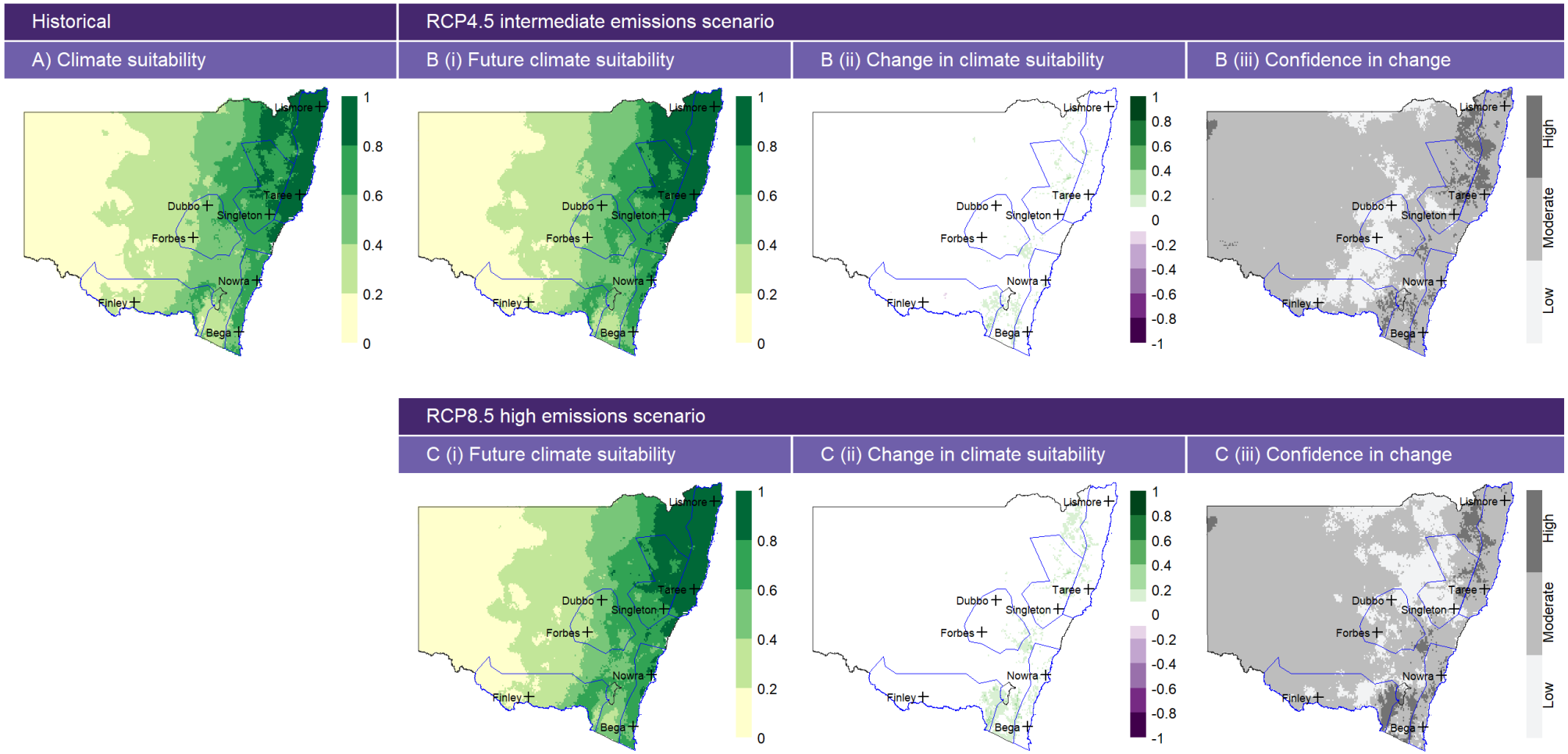
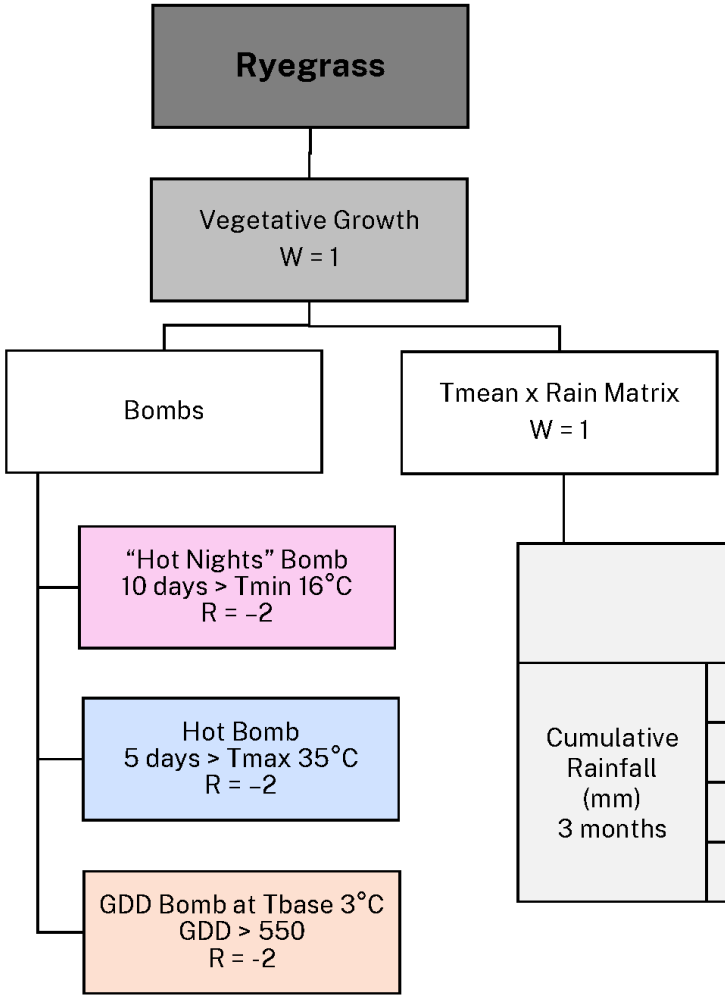


Figure A14: Ryegrass MCA model structure.

MCA model hierarchical structure and model components for ryegrass pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)				
		< 10	10 to 18	18 to 22	22 to 25	> 25
Cumulative Rainfall (mm) 3 months	< 75	0	0.2	0.3	0.2	0
	75 to 100	0.2	0.5	0.8	0.3	0.1
	100 to 150	0.3	0.6	1	0.5	0.1
	> 150	0.5	0.8	1	0.6	0.2

Figure A15: January climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

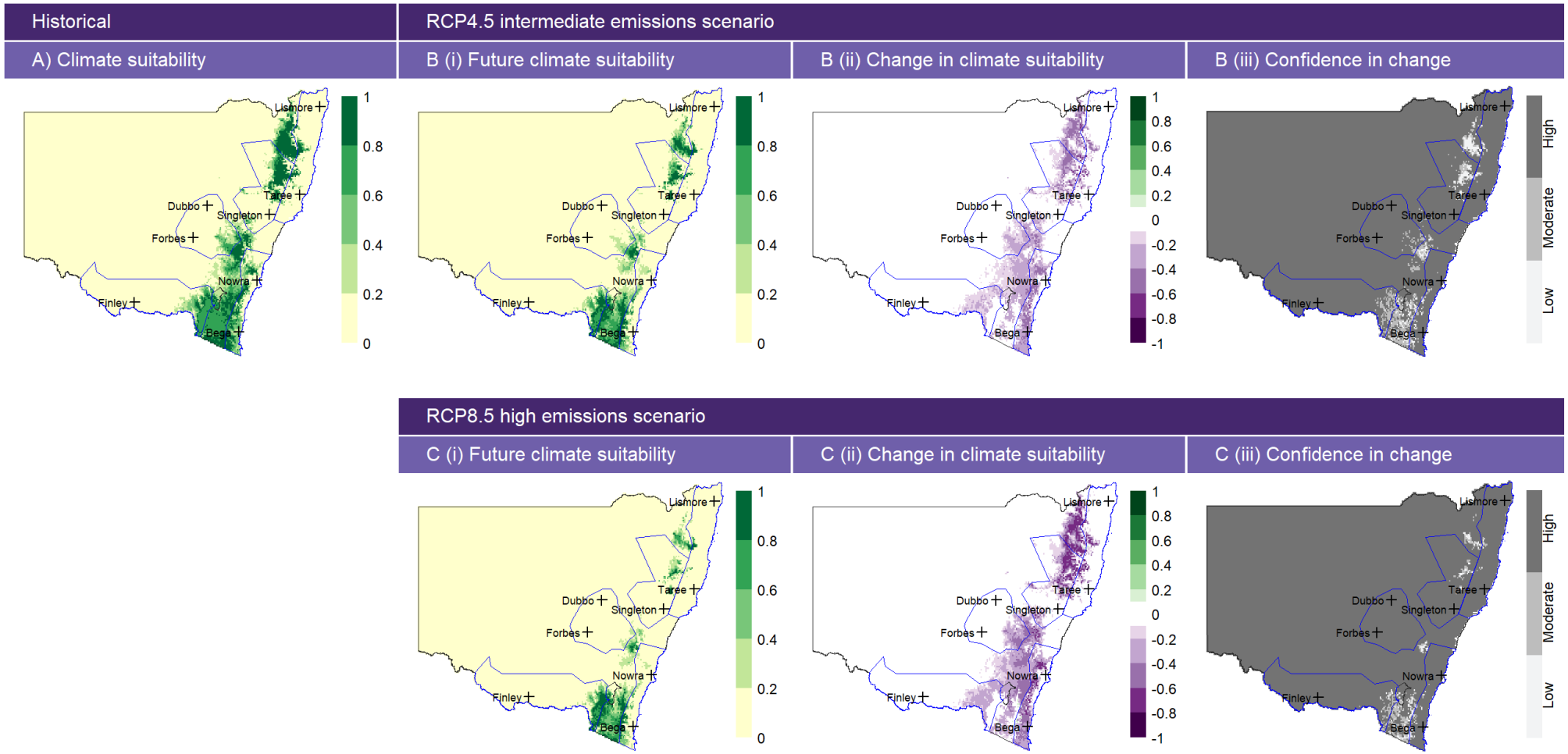


Figure A16: February climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

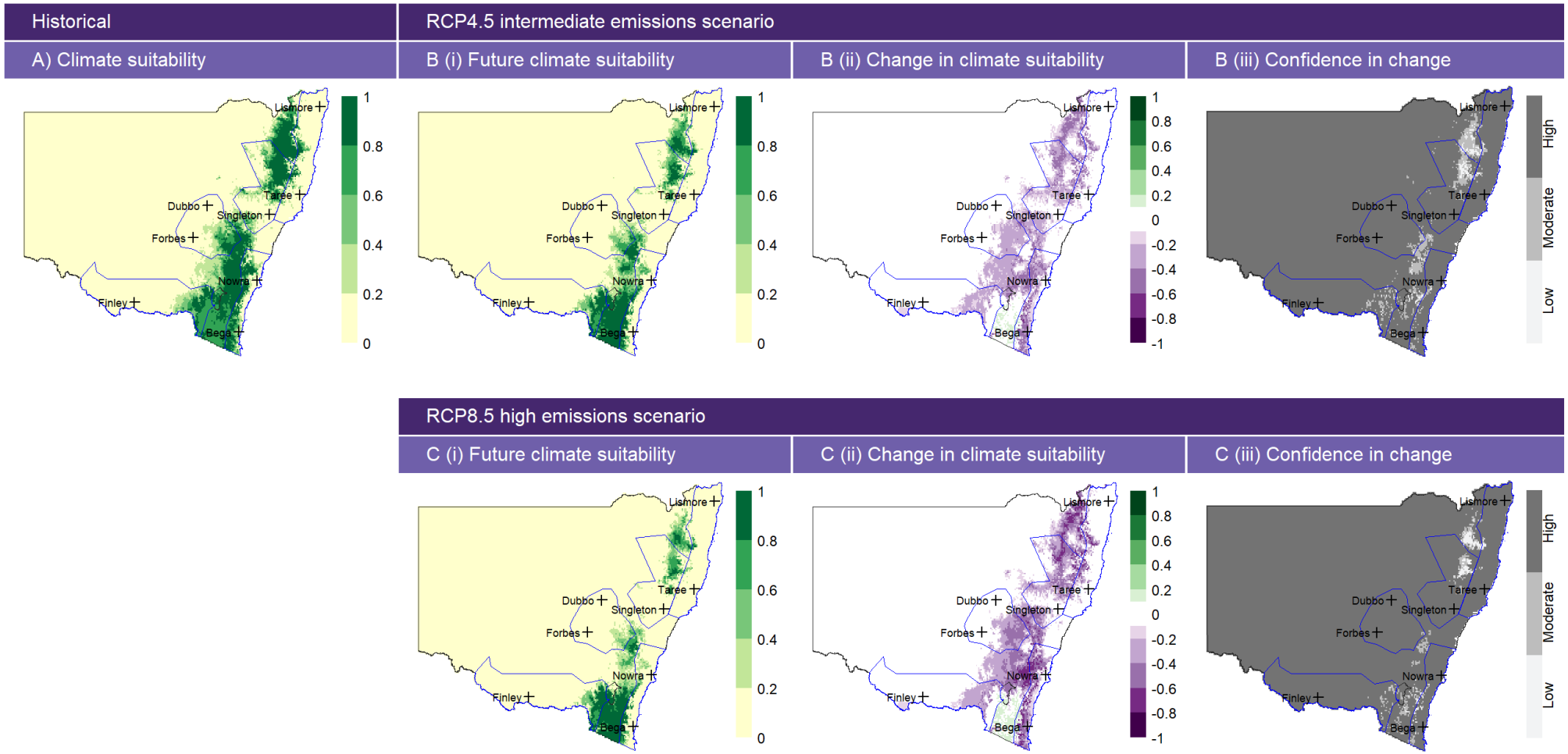


Figure A17: March climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

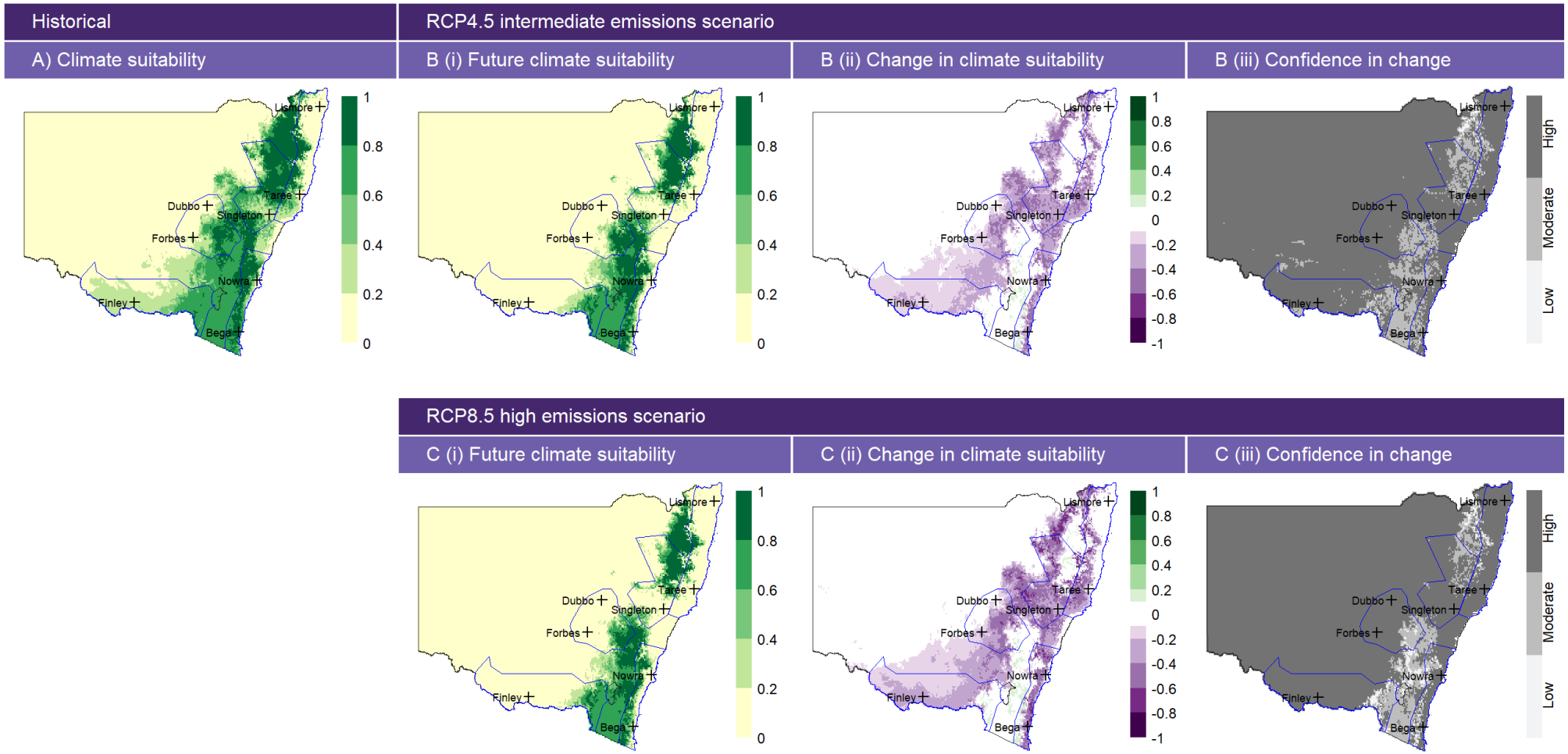


Figure A18: April climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

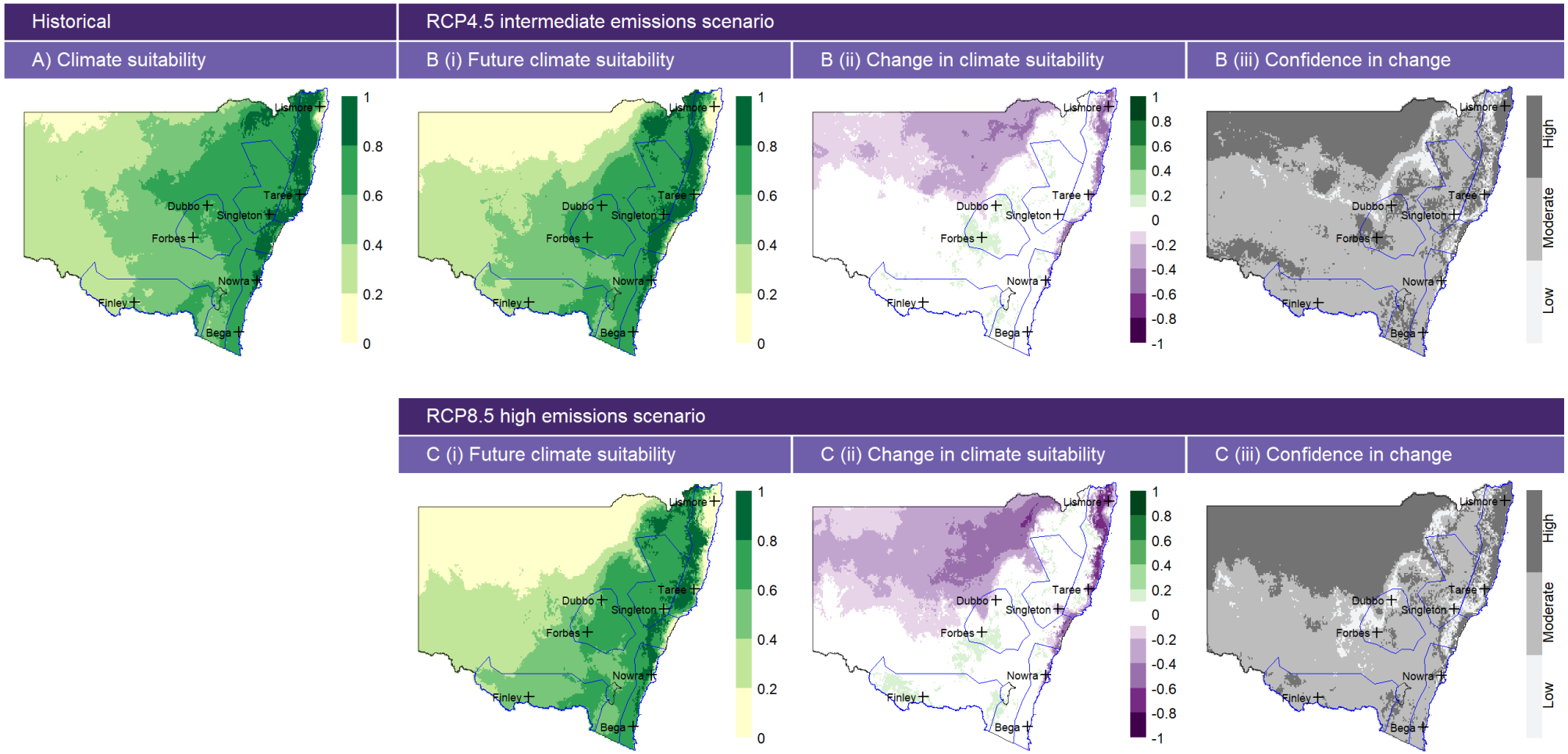


Figure A19: May climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

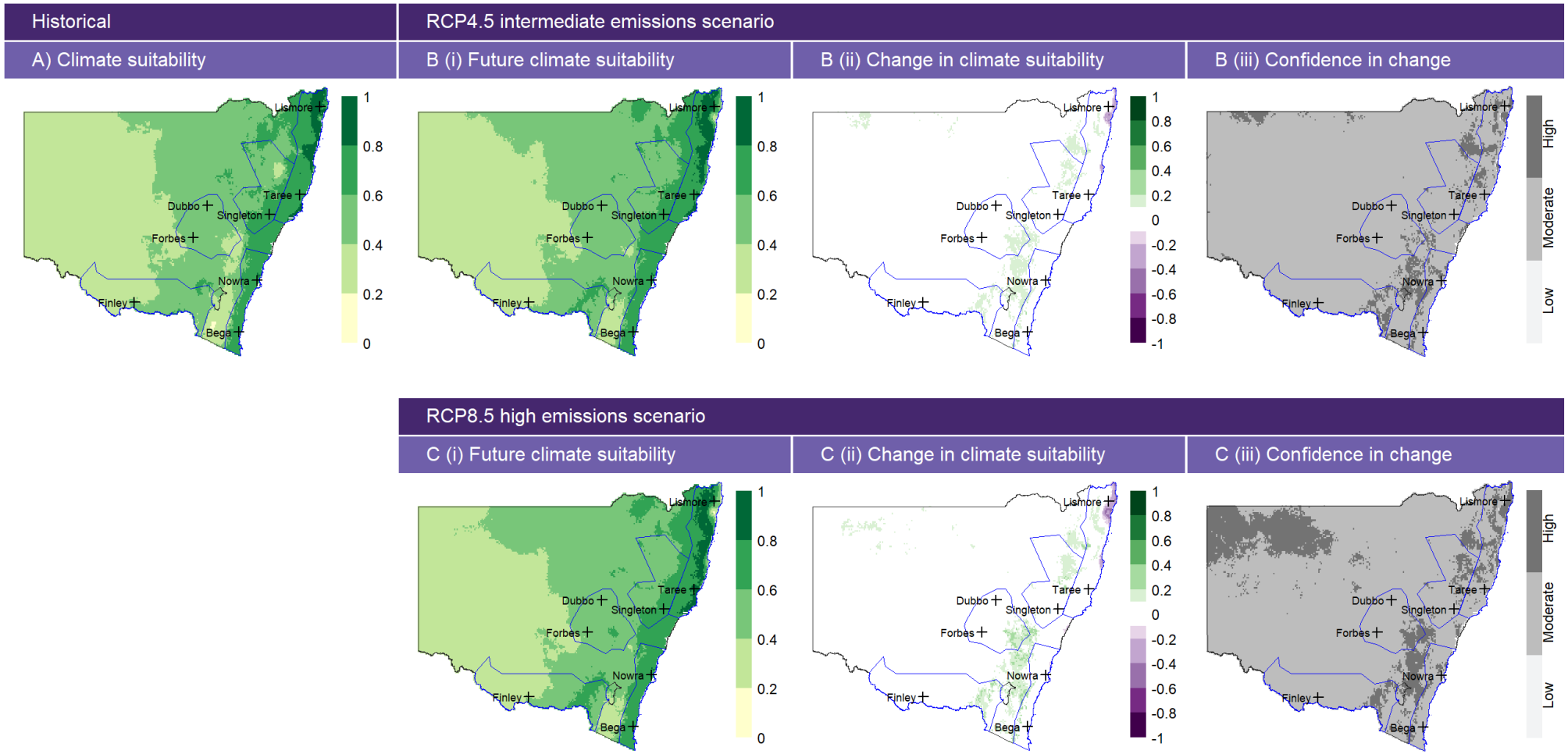


Figure A20: June climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

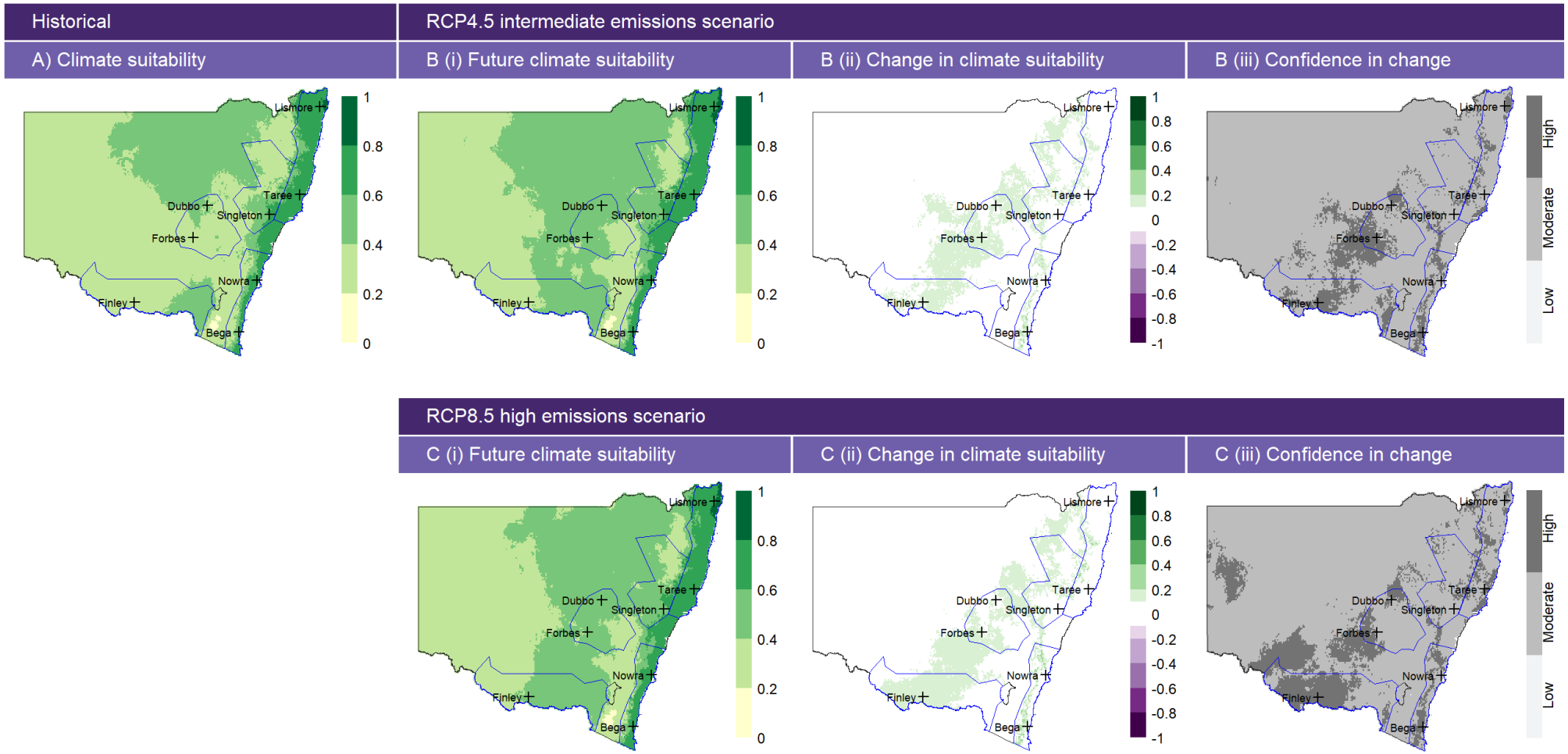


Figure A21: July climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

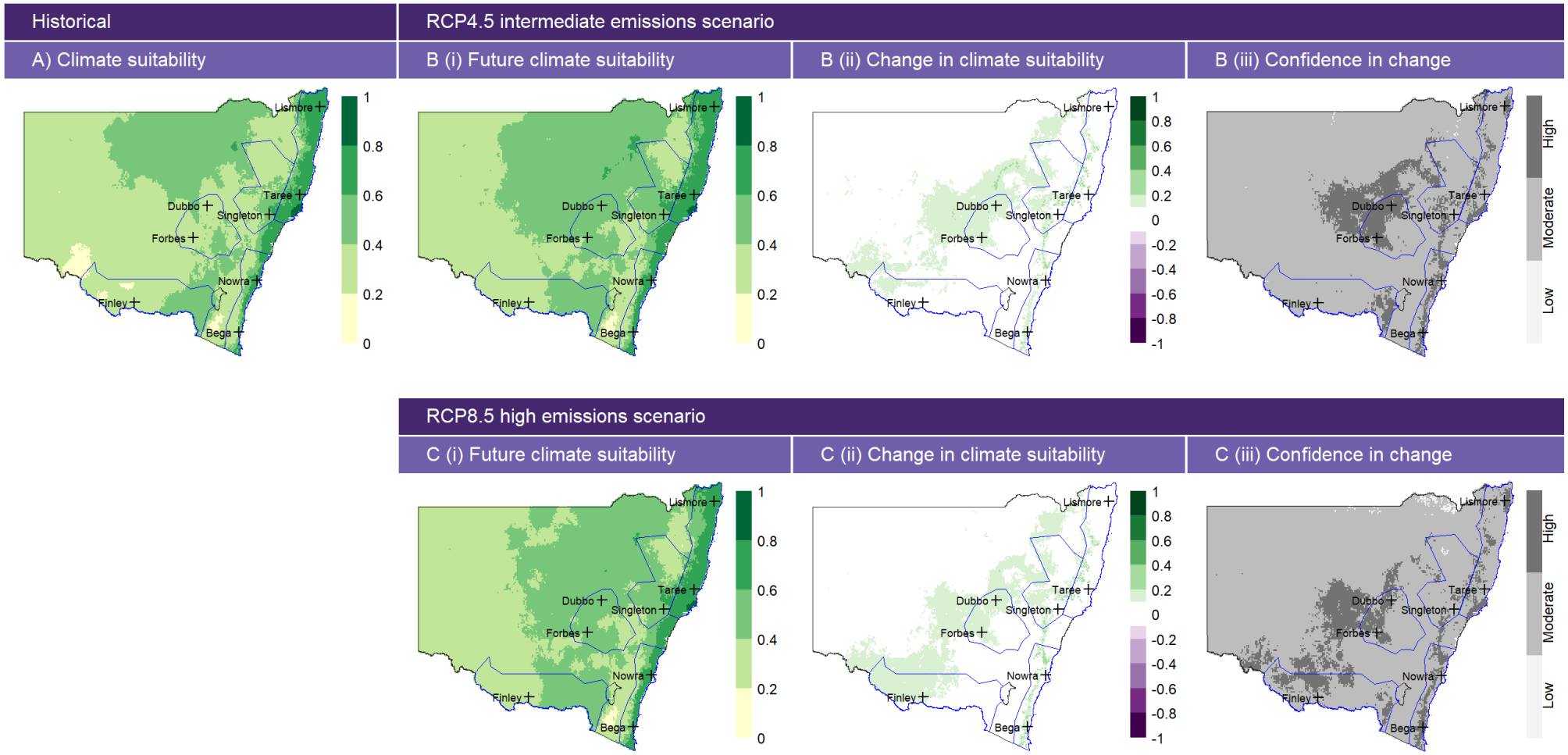


Figure A22: August climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

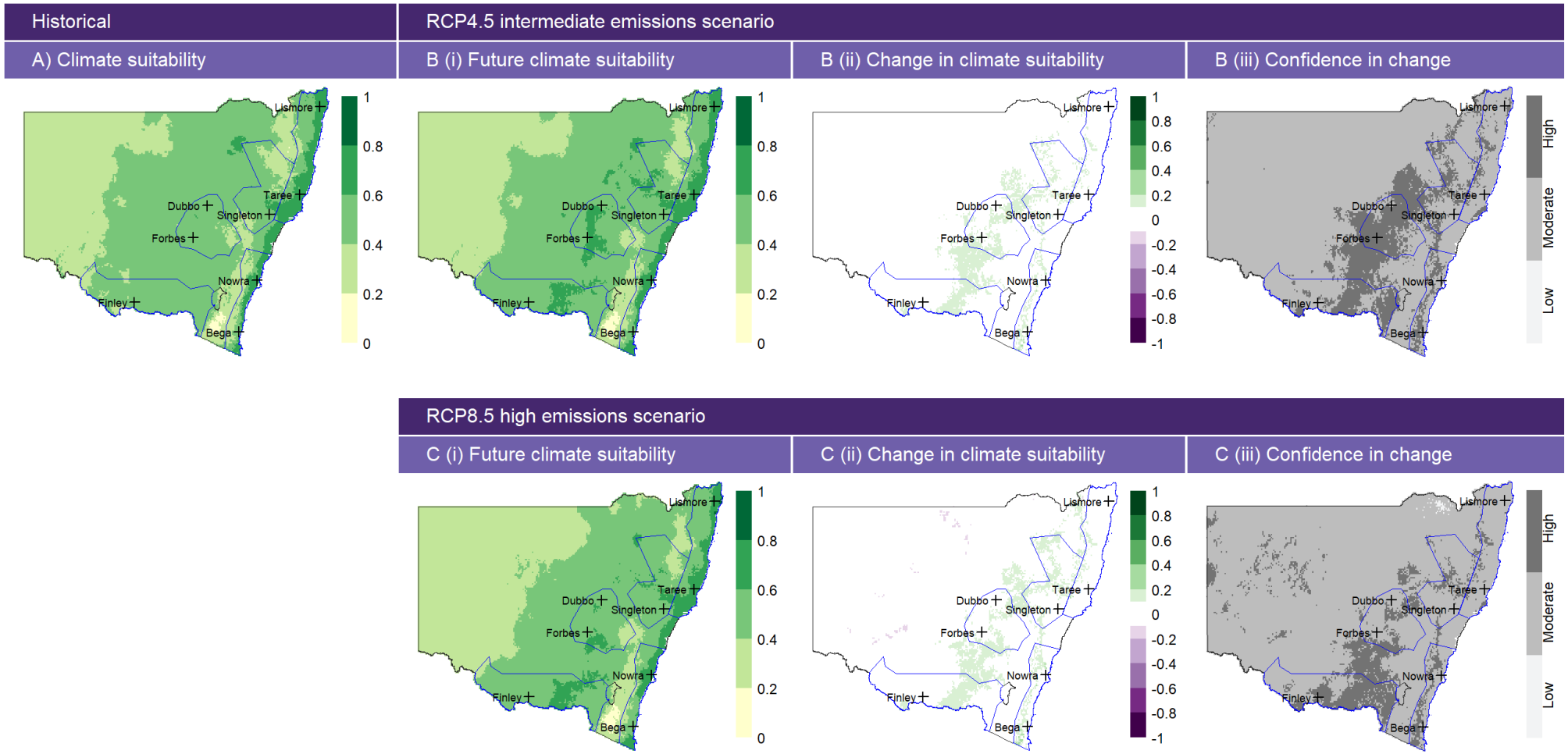


Figure A23: September climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

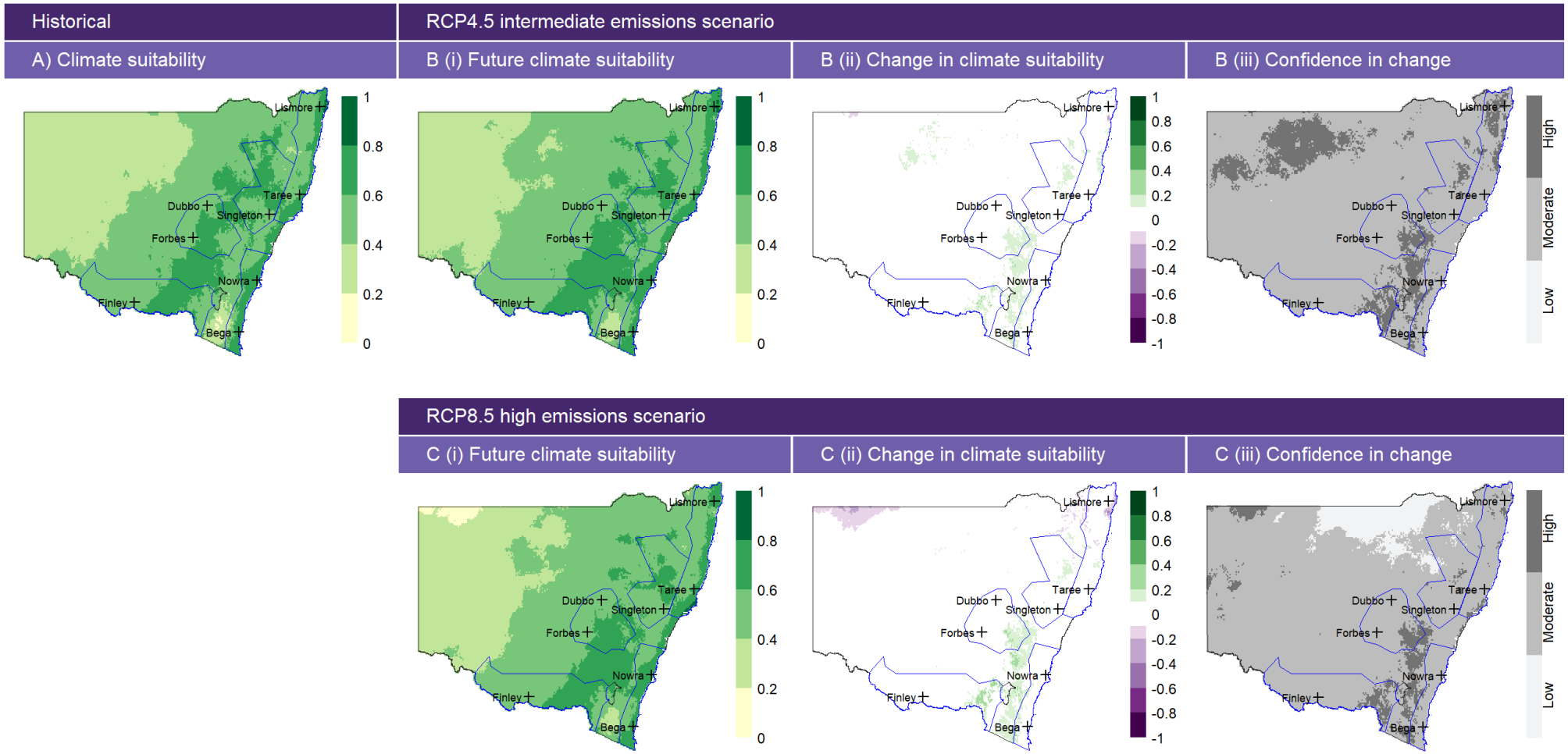


Figure A24: October climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

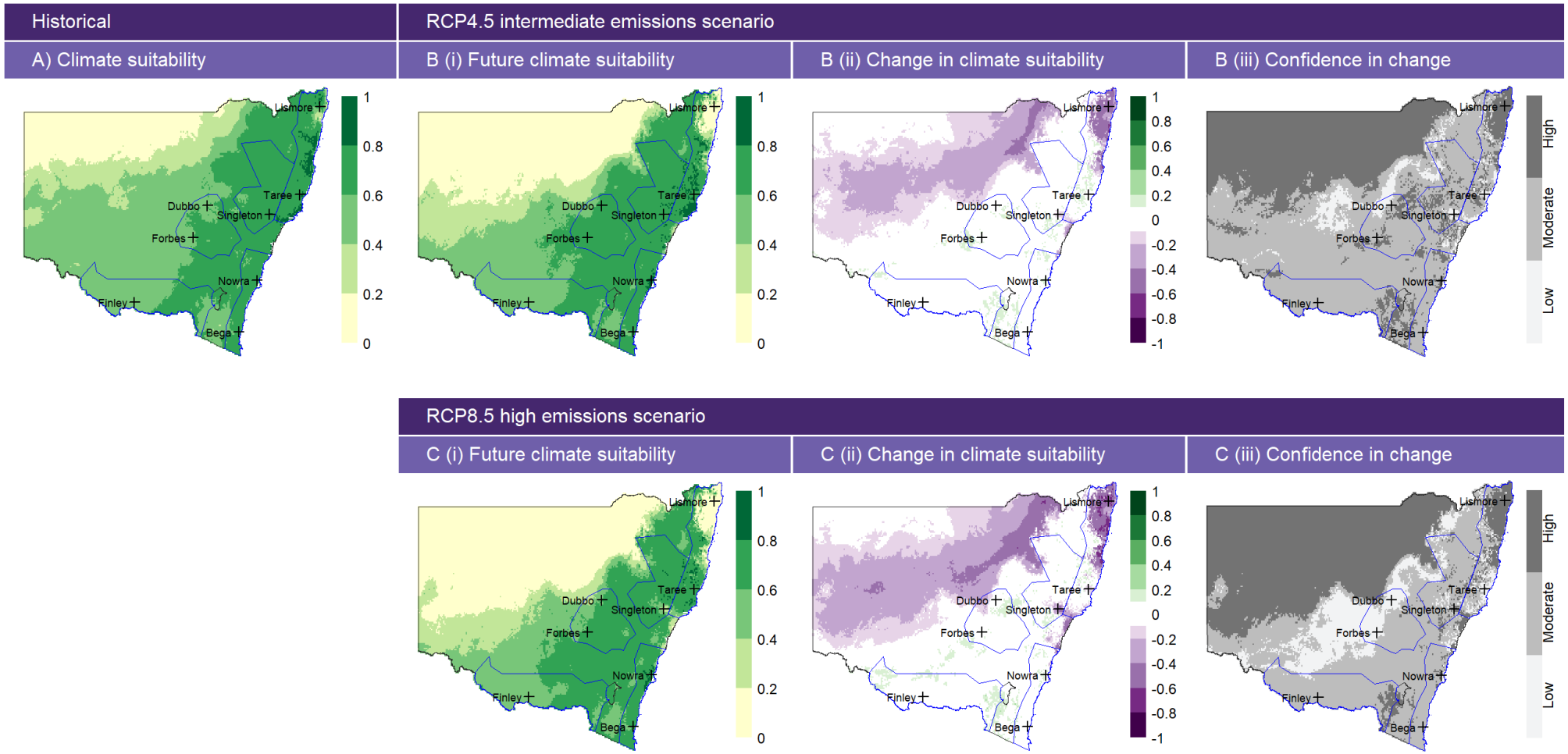


Figure A25: November climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

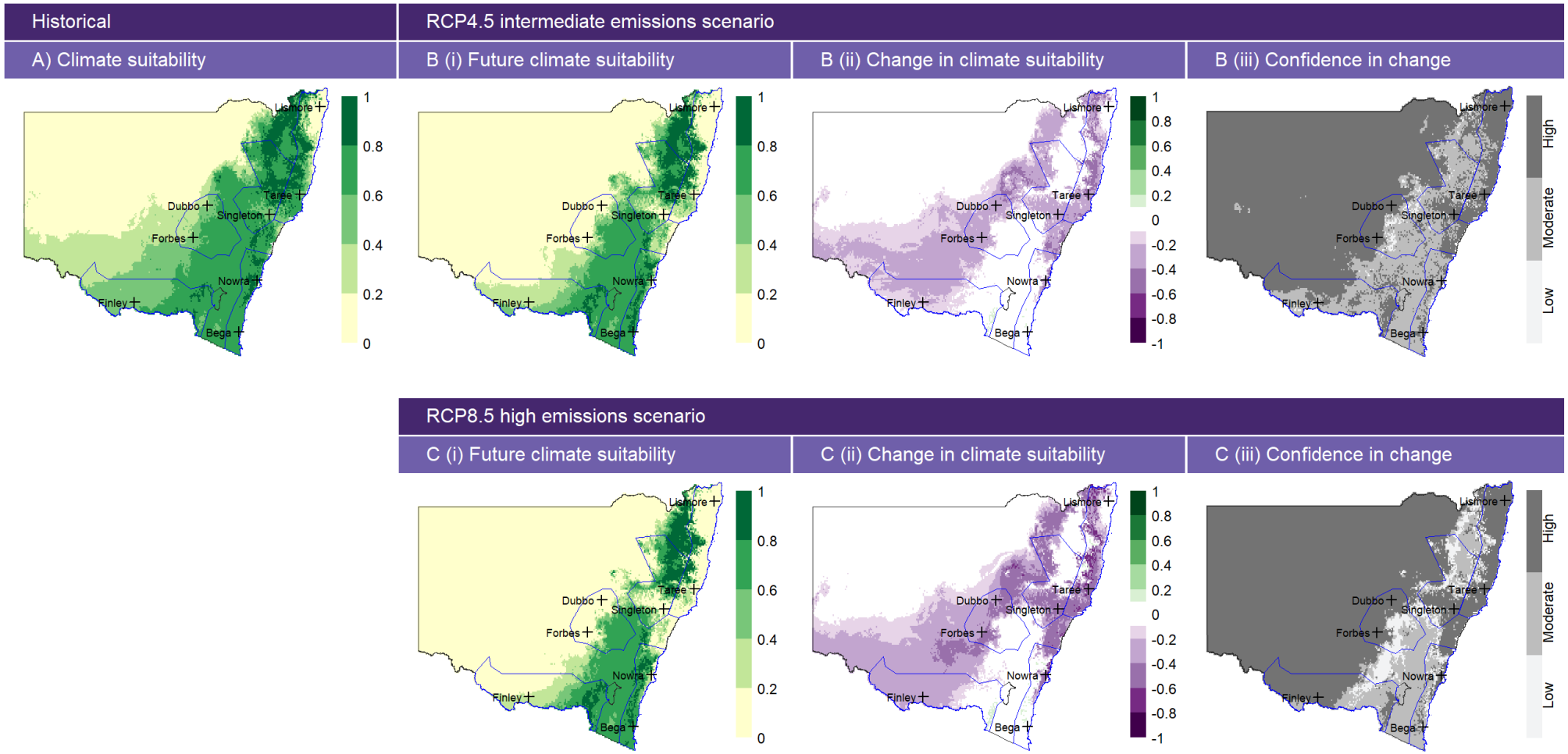


Figure A26: December climate suitability for ryegrass.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

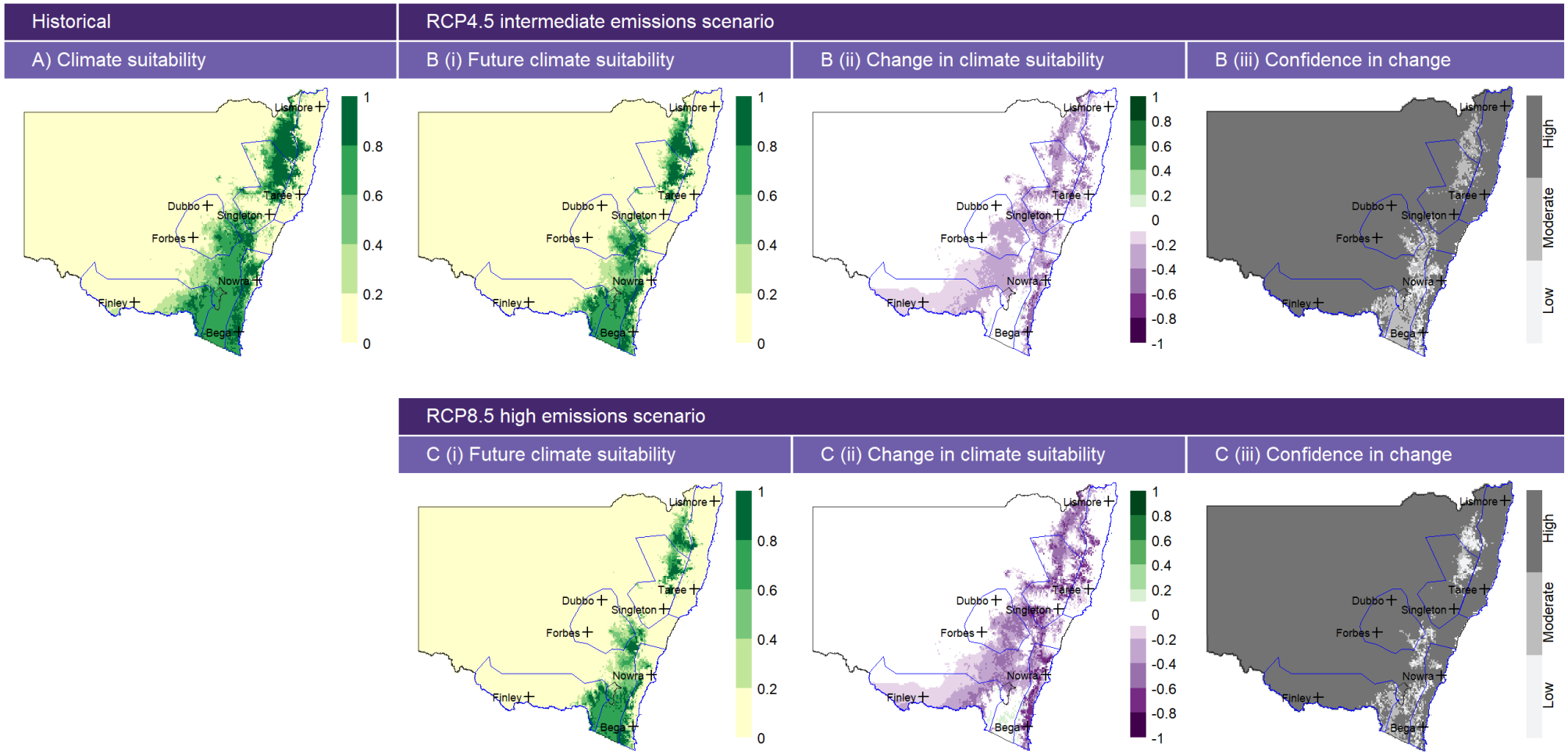
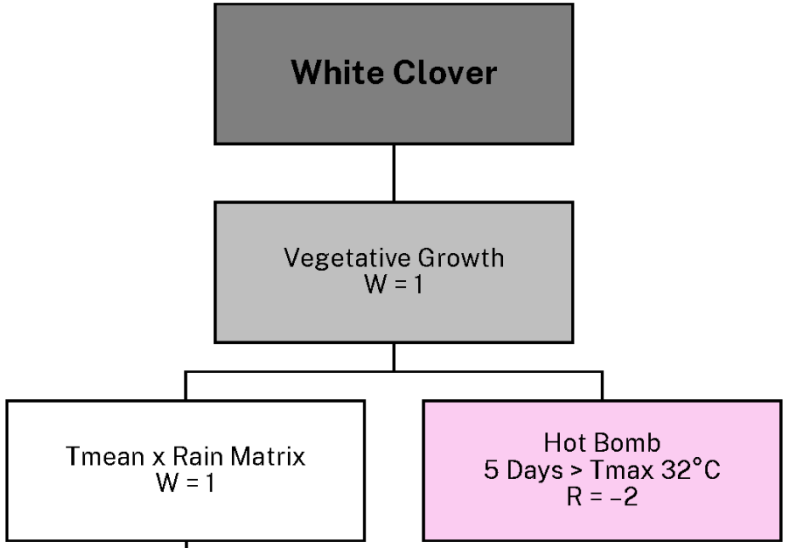


Figure A27: White clover MCA model structure.

MCA model hierarchical structure and model components for white clover pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)				
		< 4.3	4.3 to 9	9 to 14	14 to 22	> 22
Cumulative Rainfall (mm) 3 months	> 192	0.2	0.7	1	1	0.2
	174 to 192	0.2	0.6	1	1	0.2
	120 to 174	0.1	0.5	0.6	0.5	0.1
	< 120	0	0	0	0	0

Figure A28: January climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

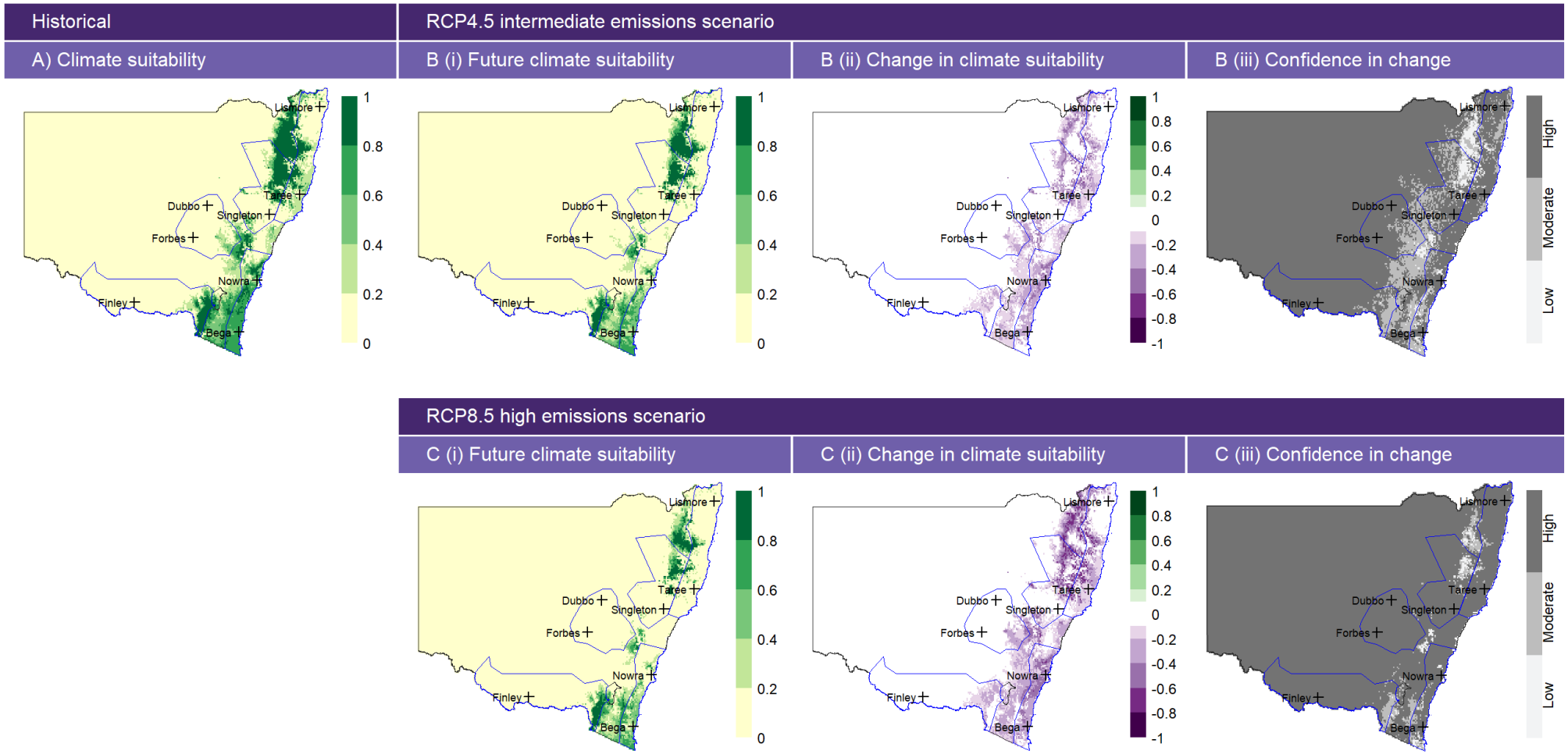


Figure A29: February climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

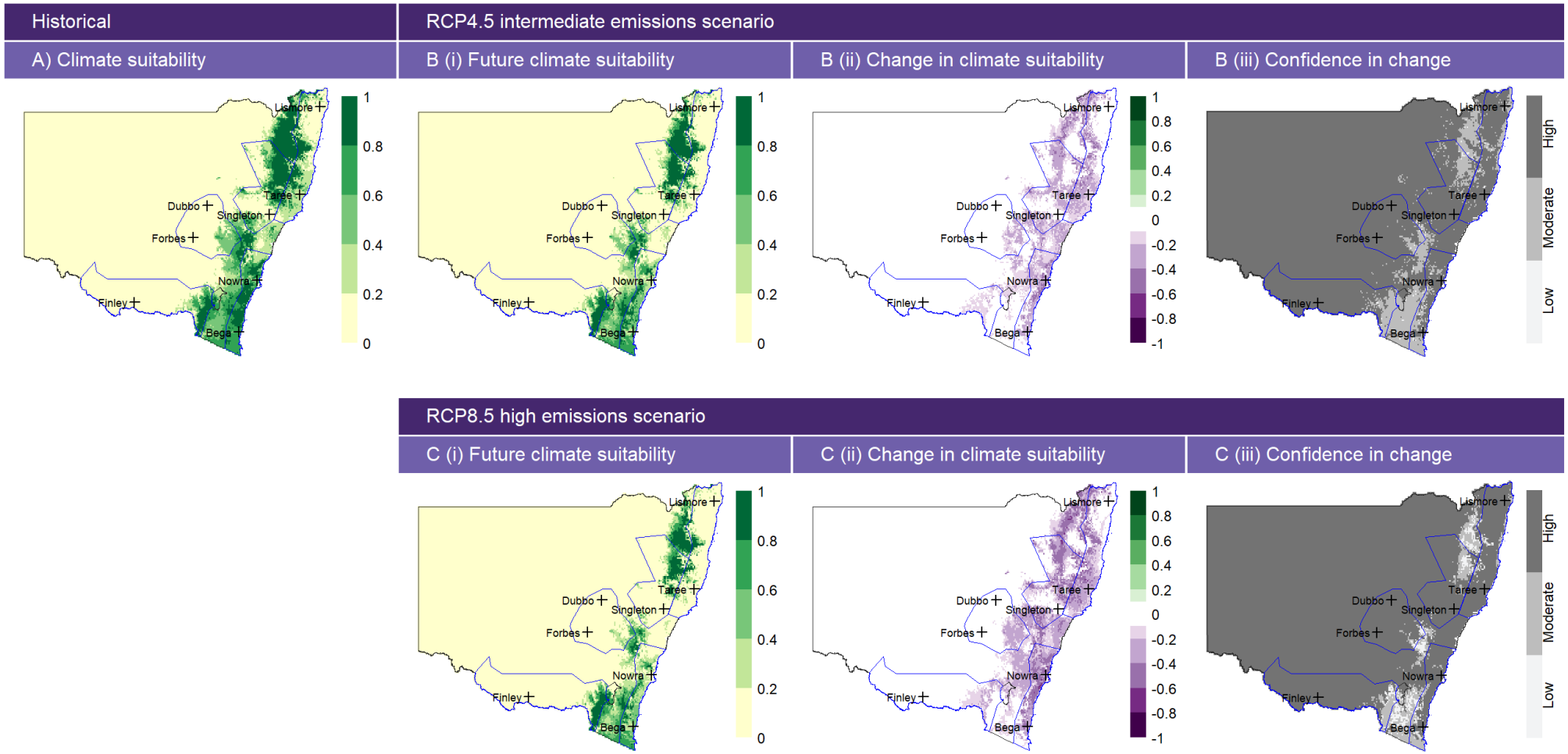


Figure A30: March climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

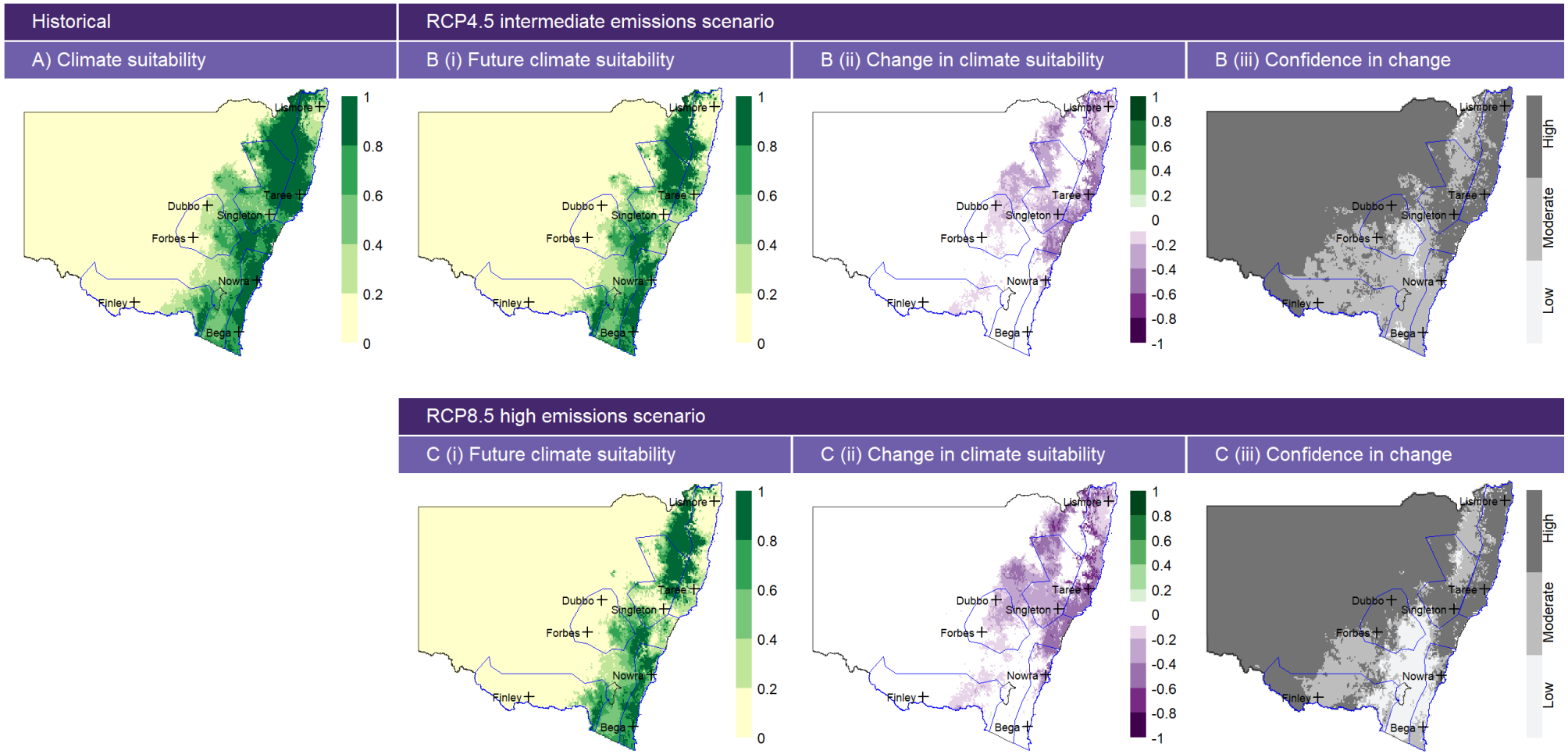


Figure A31: April climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

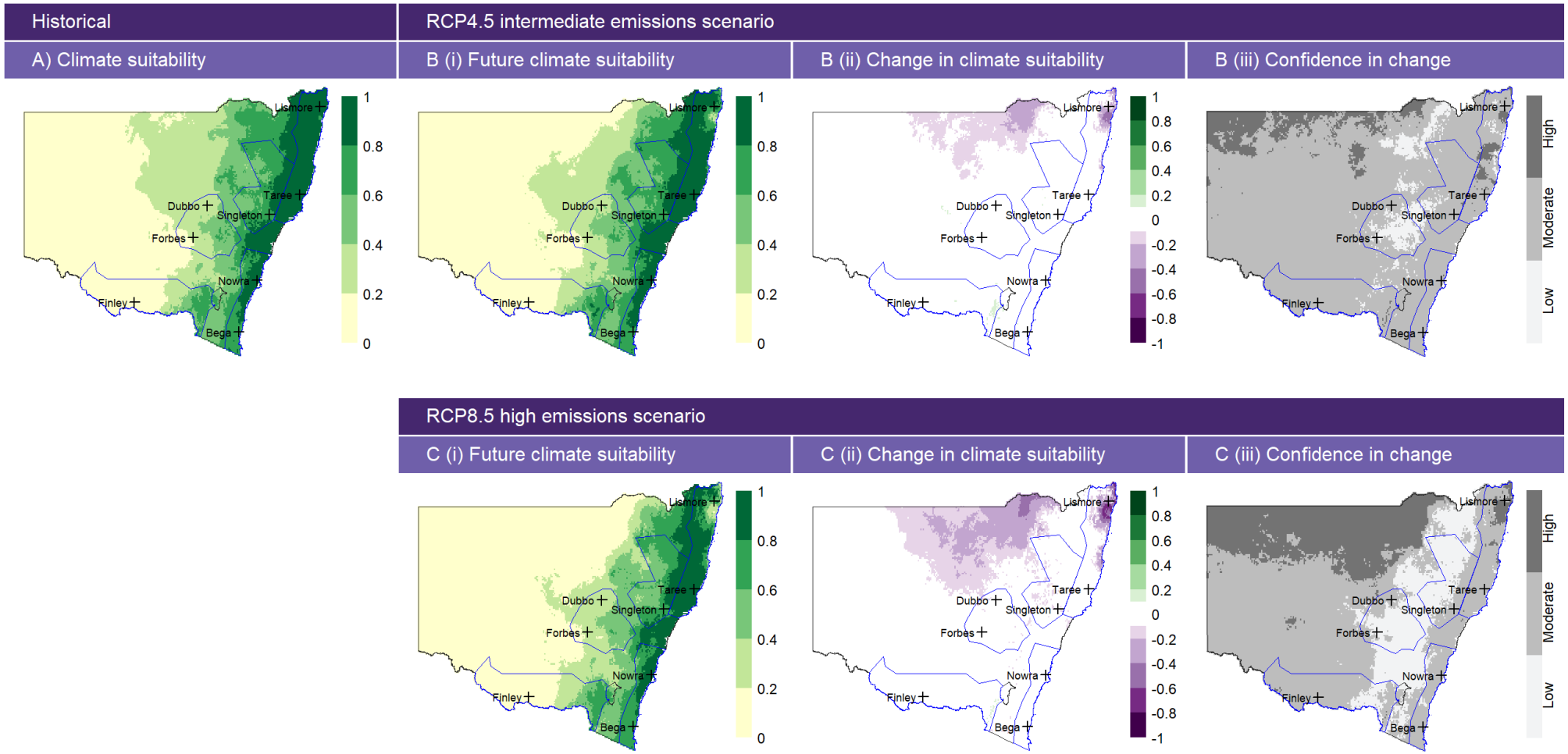


Figure A32: May climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

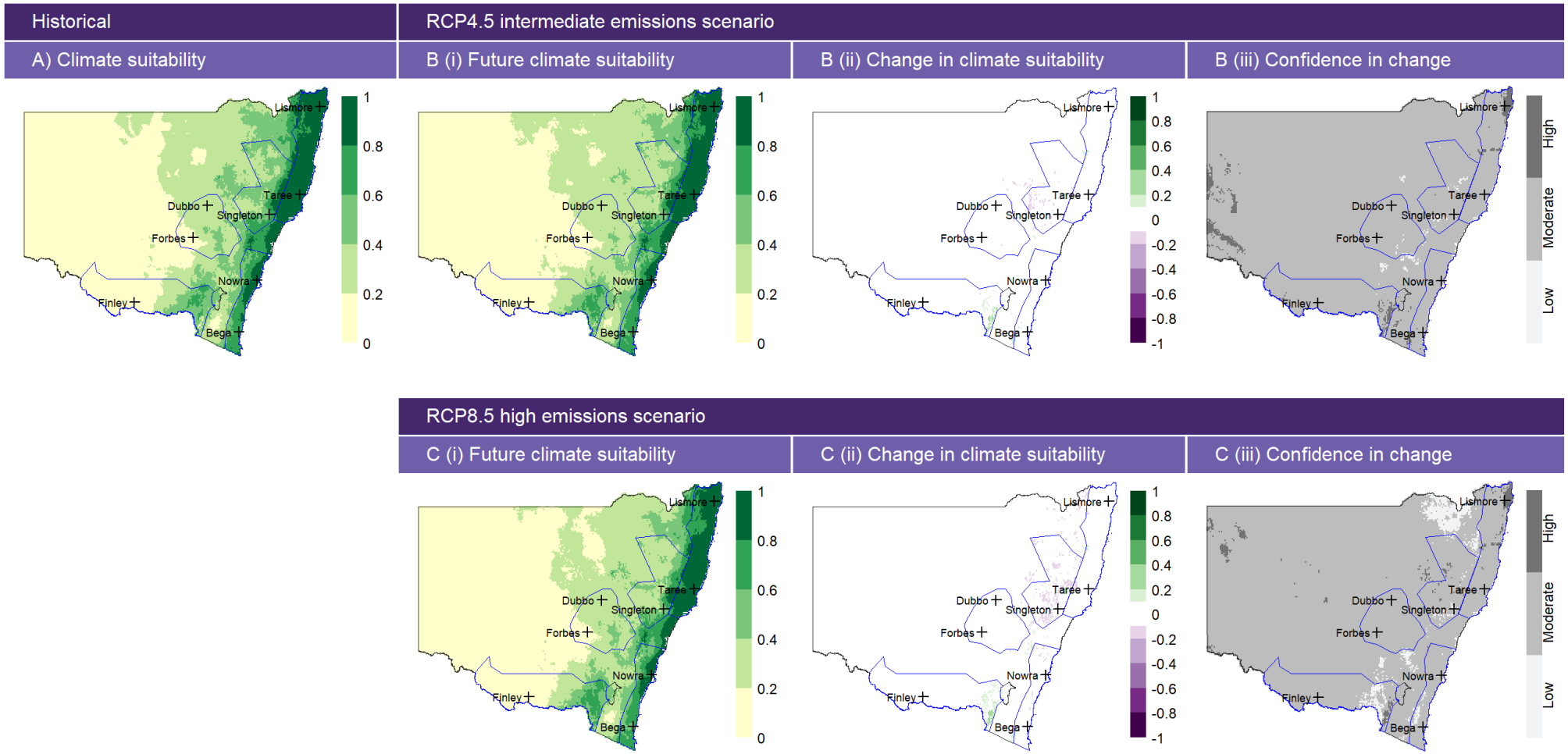


Figure A33: June climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

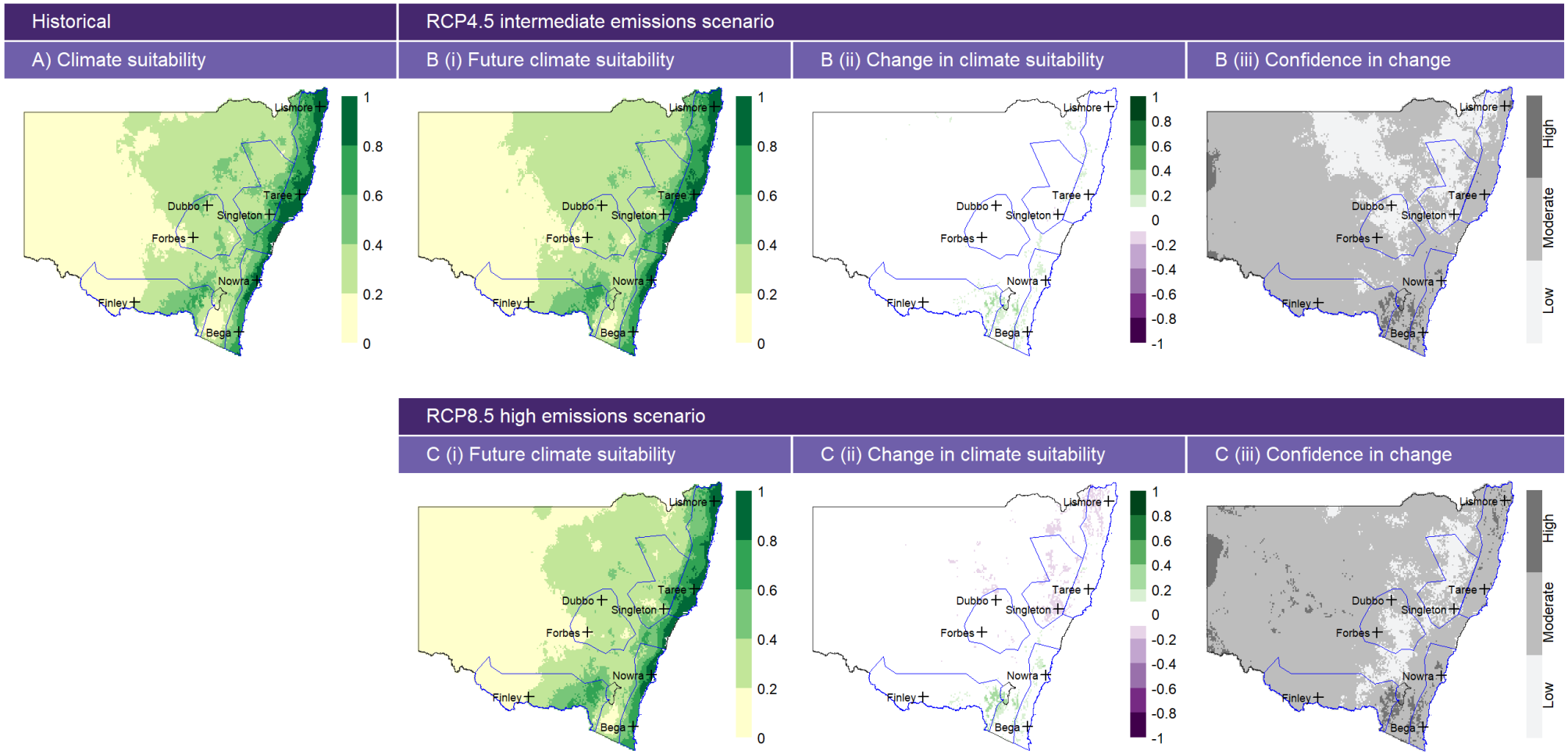


Figure A34: July climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

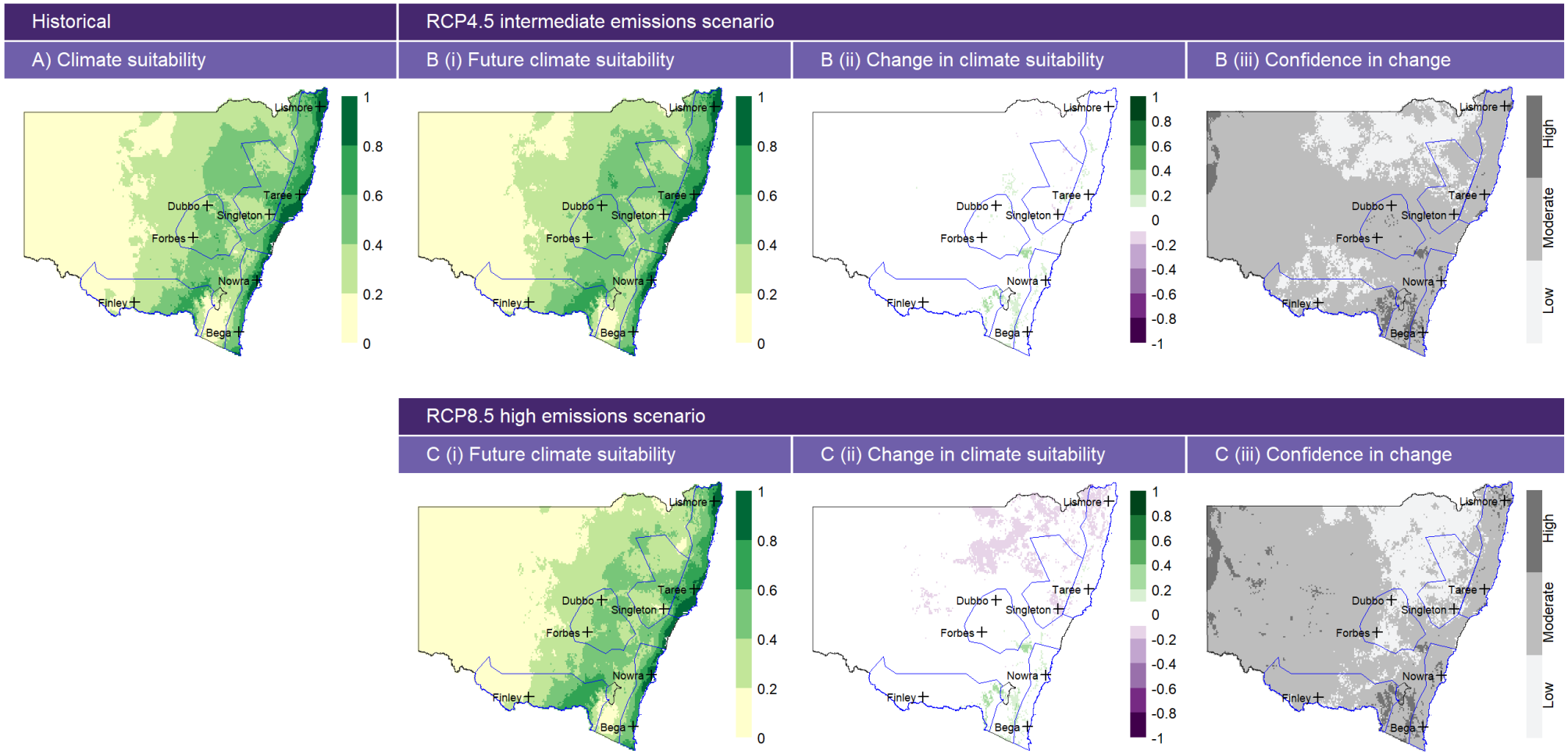


Figure A35: August climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

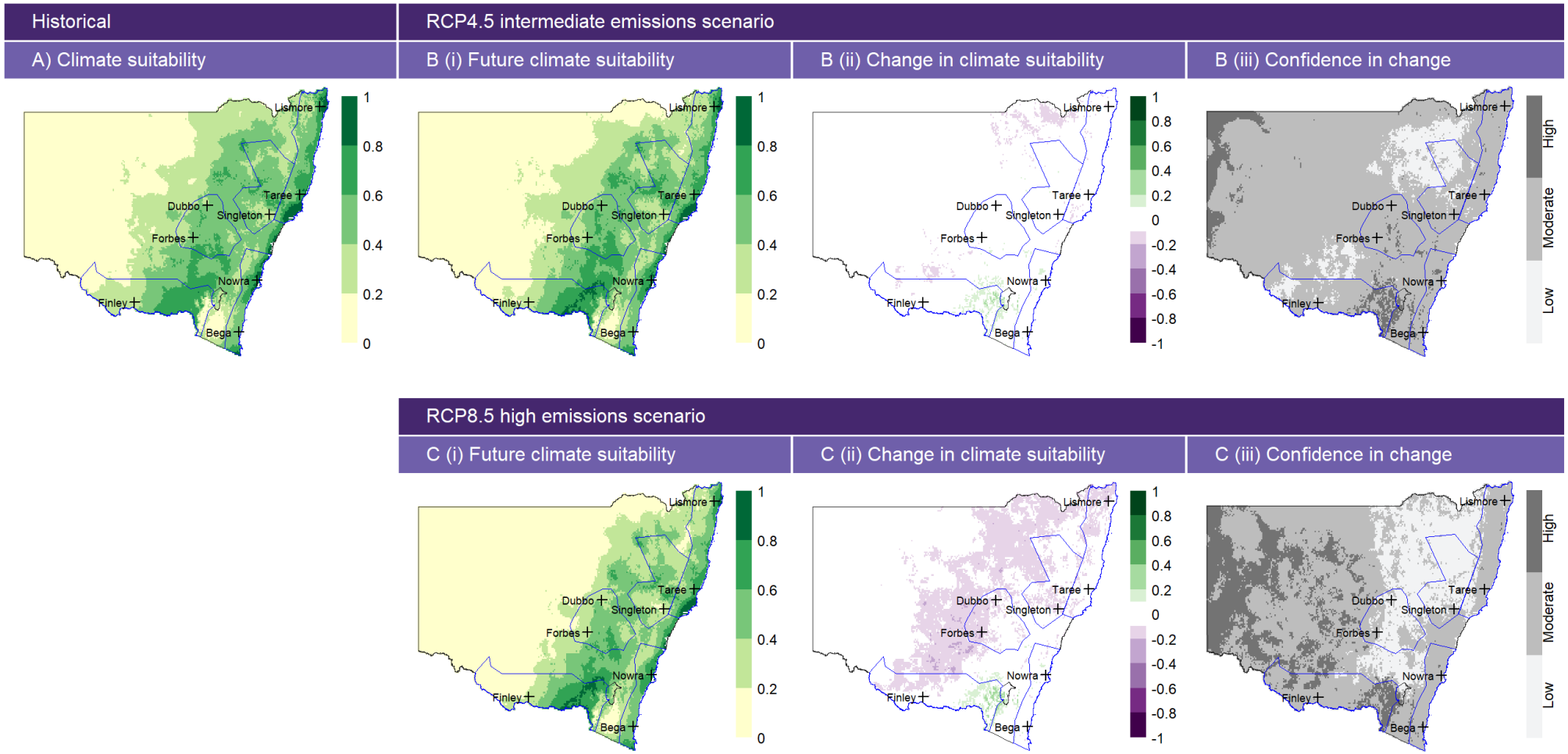


Figure A36: September climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

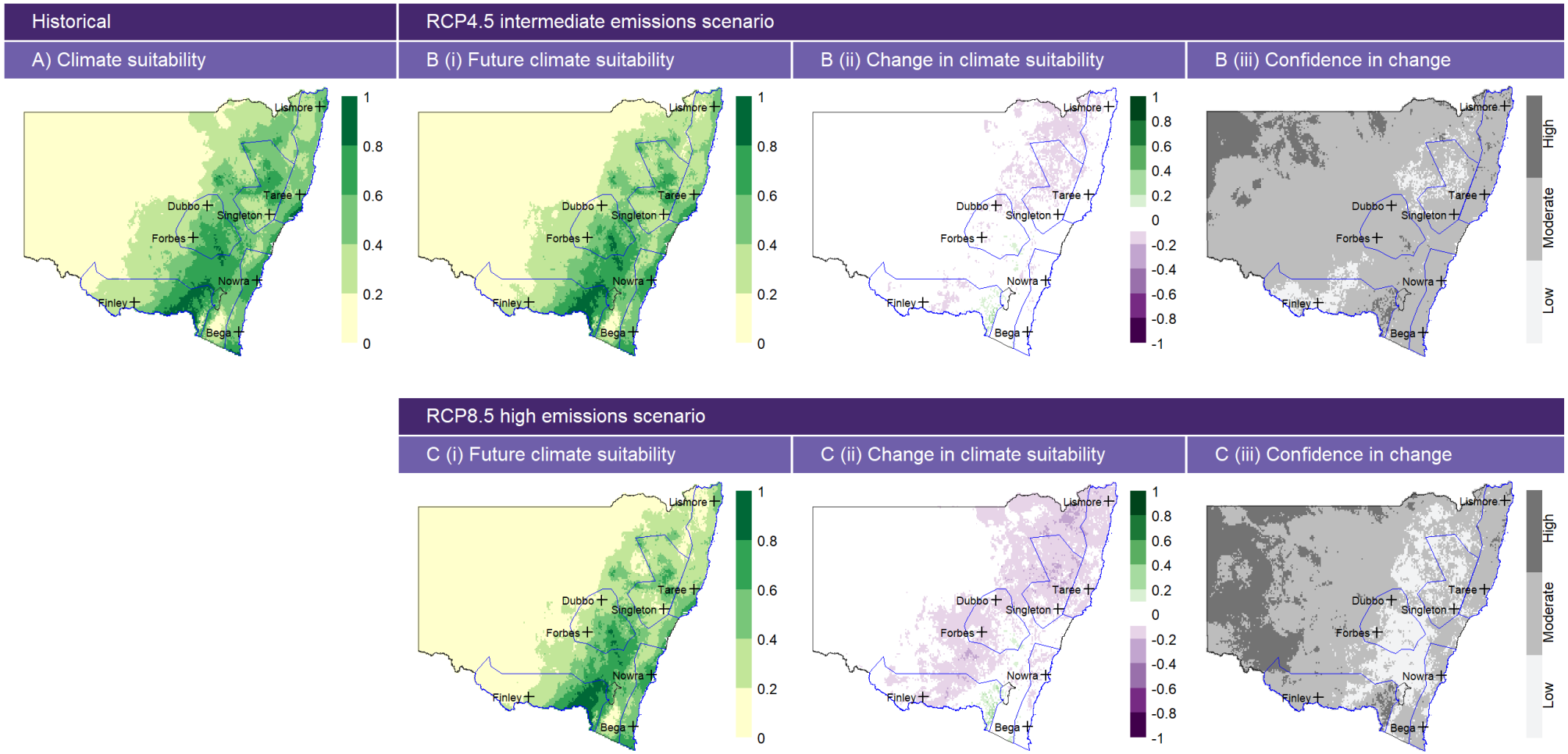


Figure A37: October climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

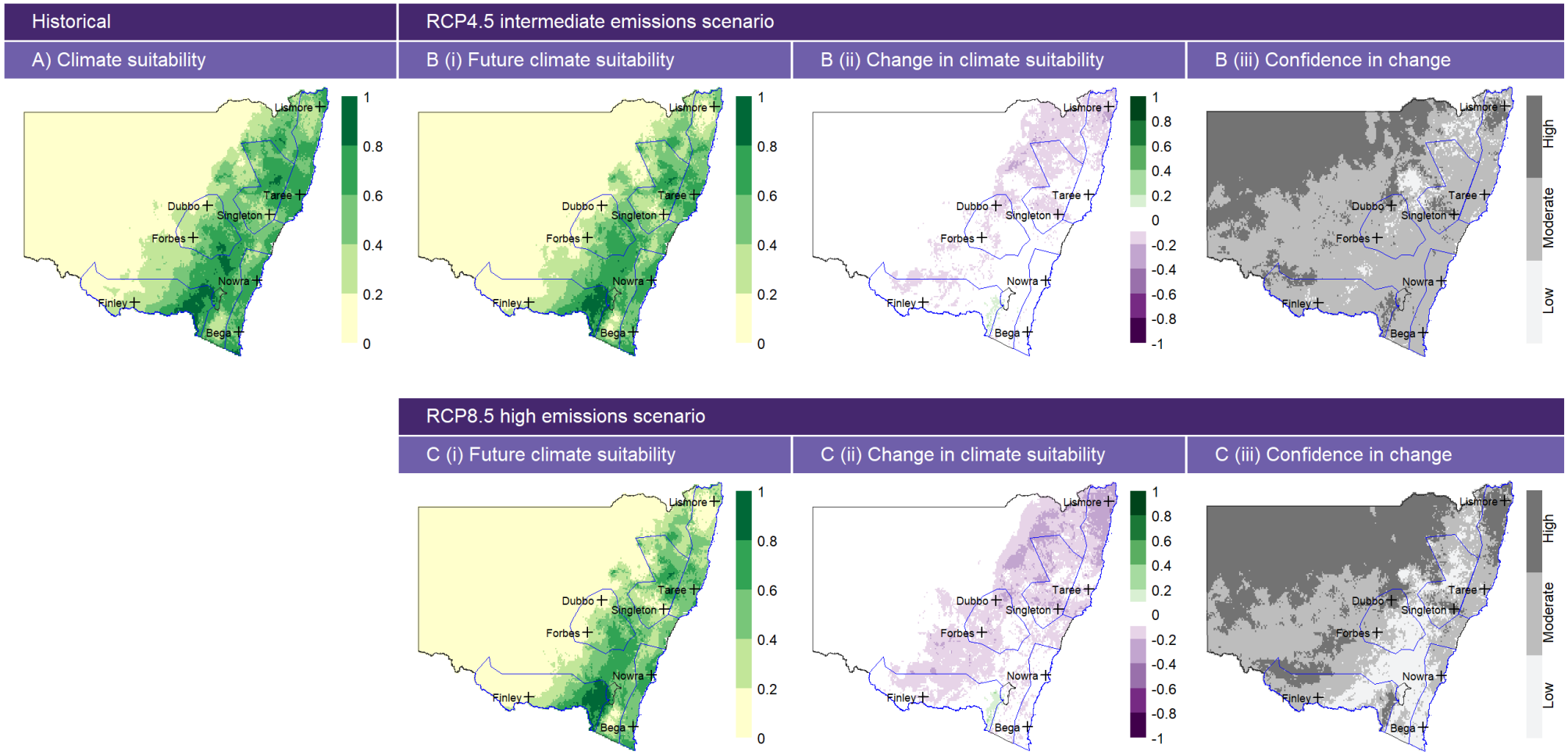


Figure A38: November climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

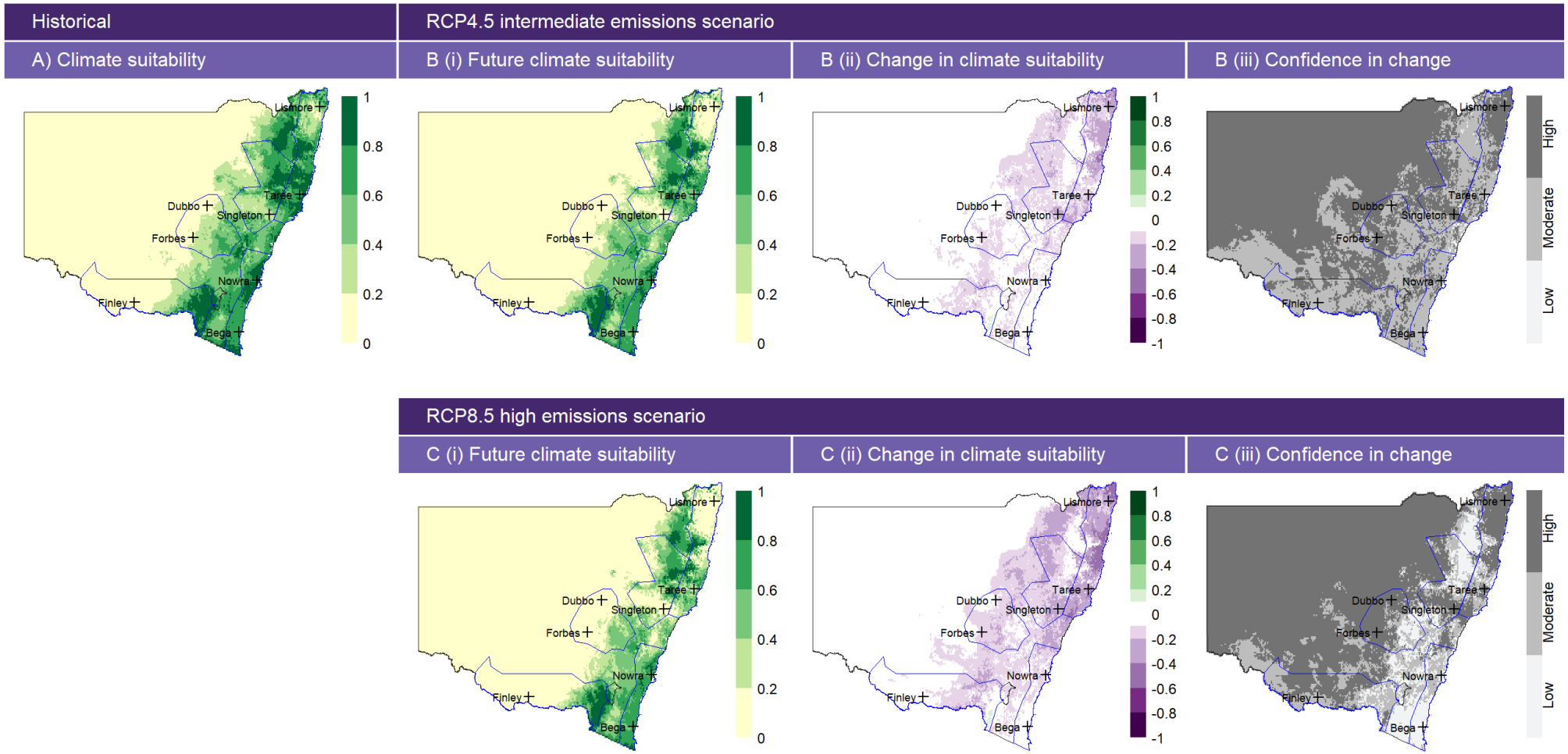


Figure A39: December climate suitability for white clover.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

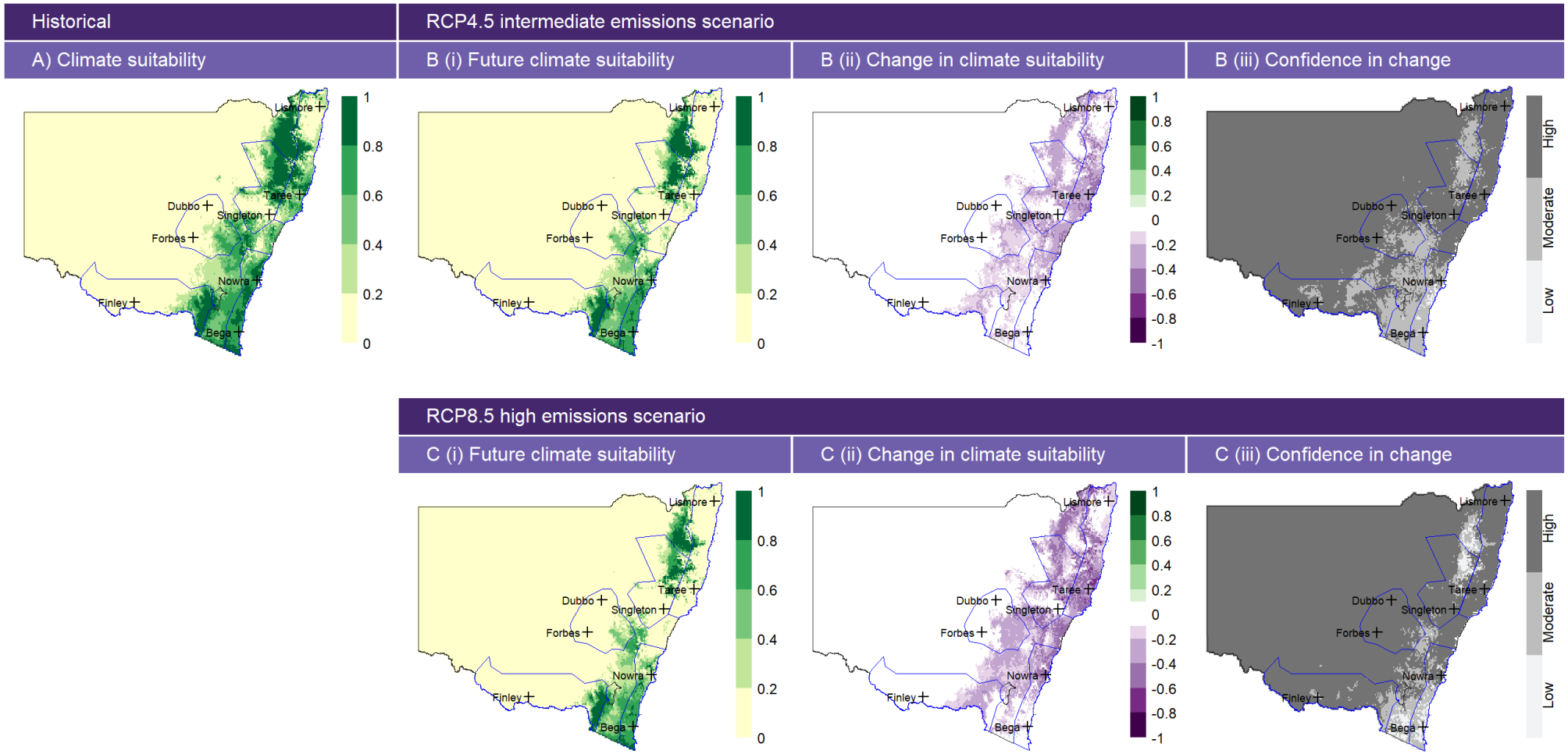
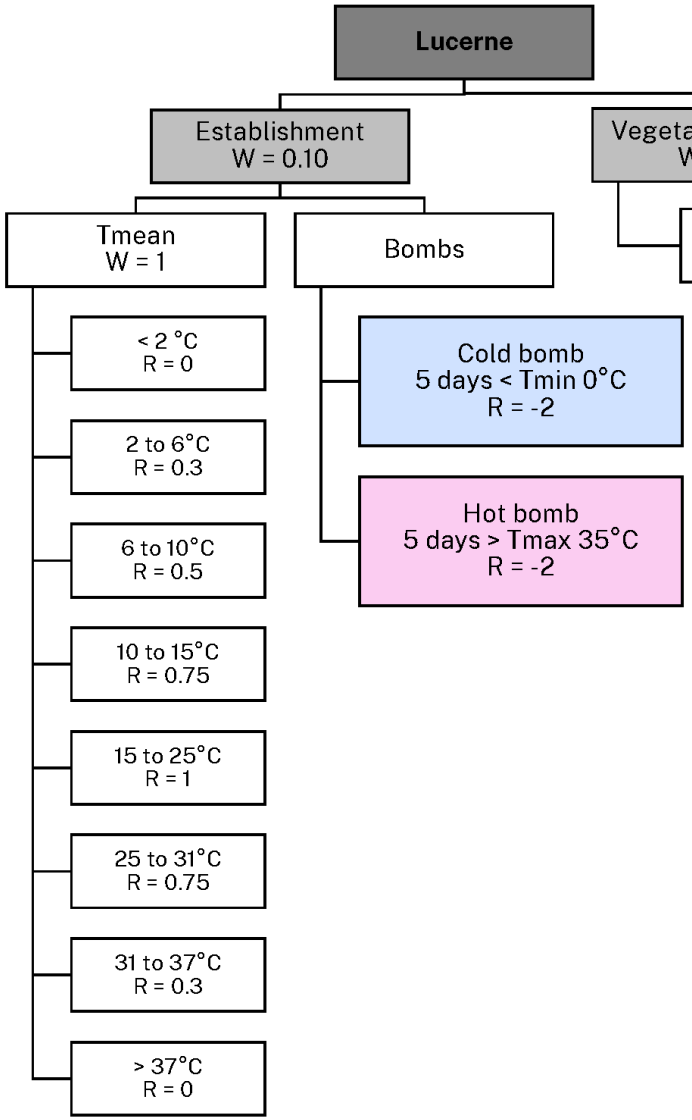


Figure A40: Lucerne MCA model structure.

MCA model hierarchical structure and model components for lucerne pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)				
		< 7	7 to 11	11 to 19	19 to 25	> 25
Cumulative Rainfall (mm) 3 months	< 90	0.2	0.4	0.5	0.3	0
	90 to 300	0.3	0.6	1	0.8	0.3
	> 300	0	0.3	0.3	0.2	0

Figure A41: January climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

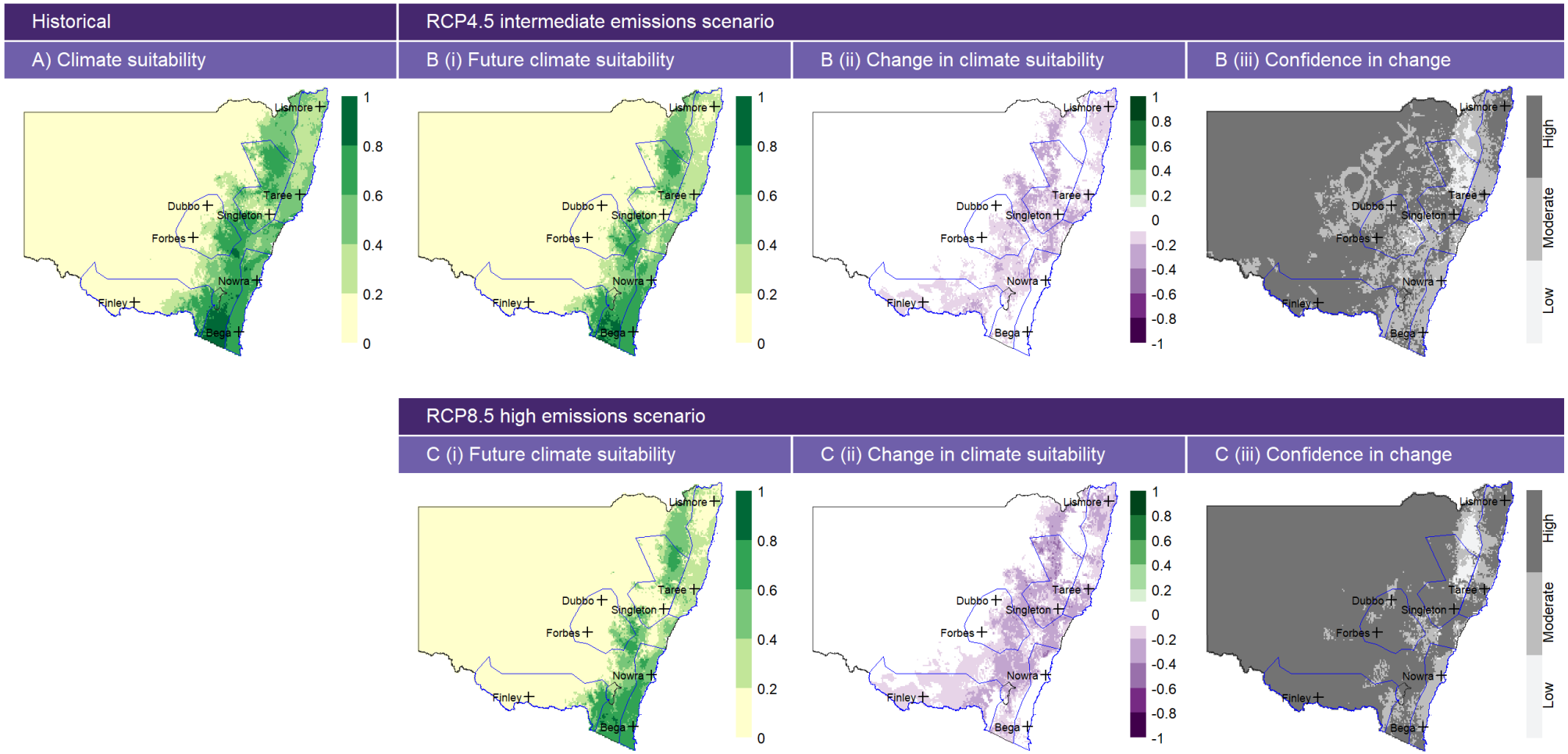


Figure A42: February climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

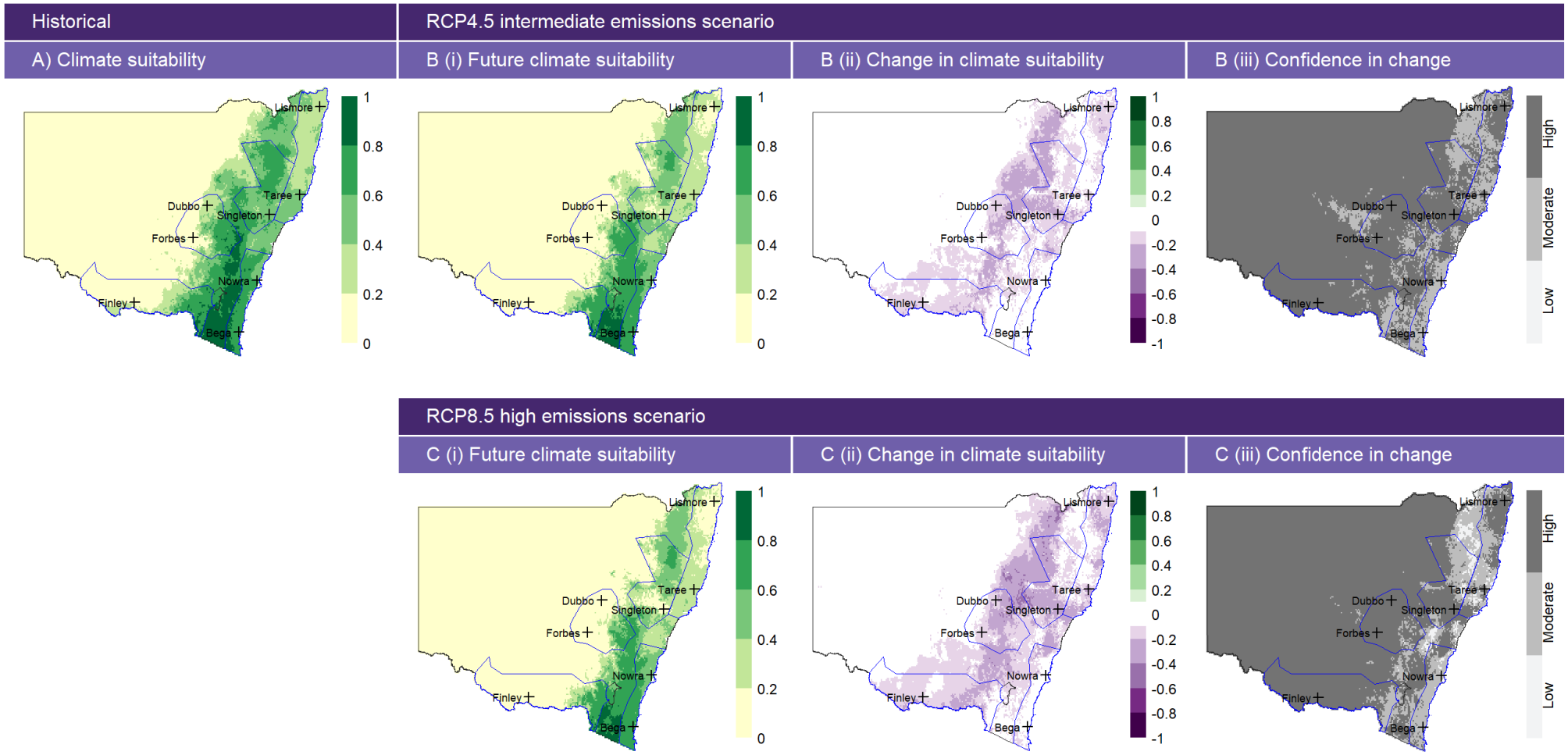


Figure A43: March climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

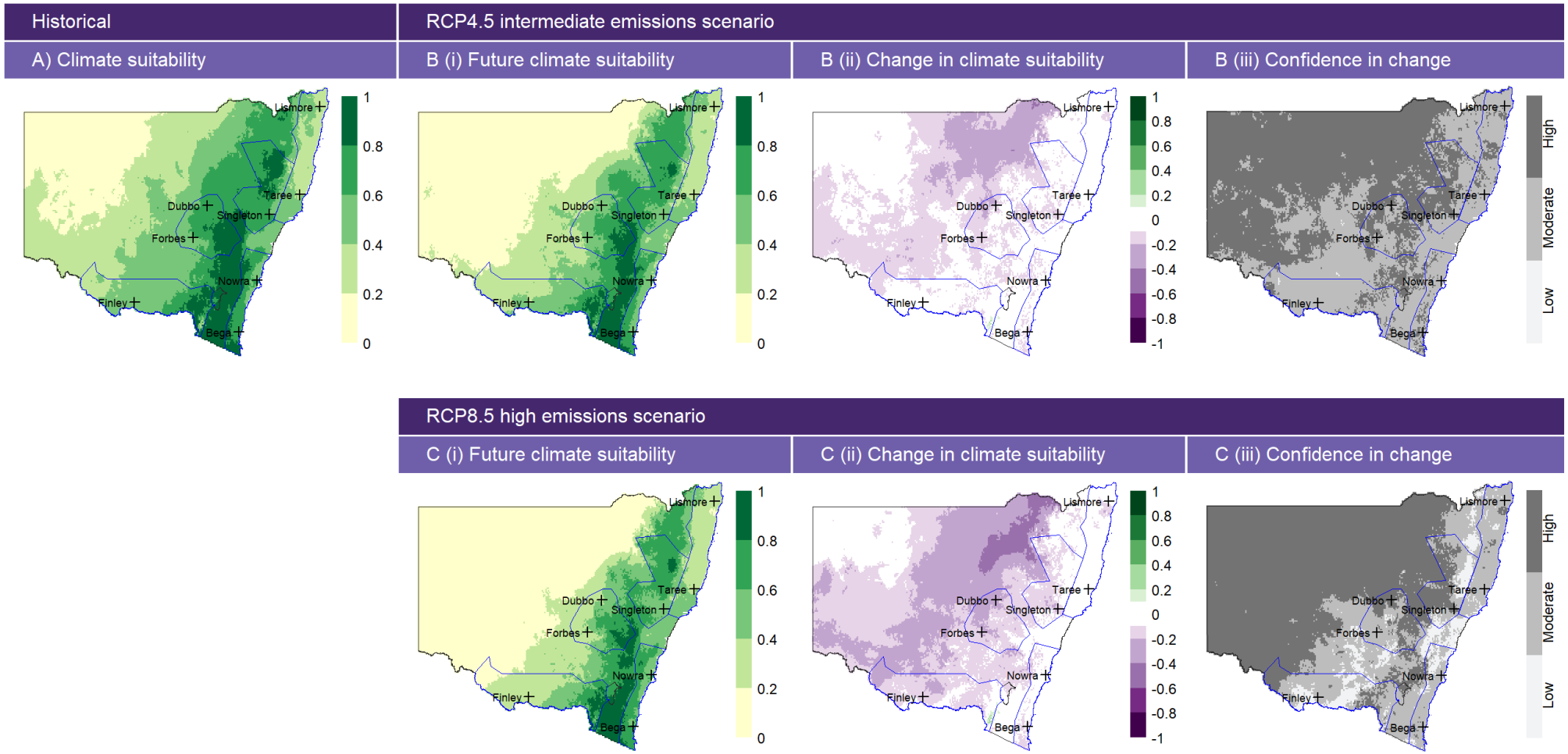


Figure A44: April climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

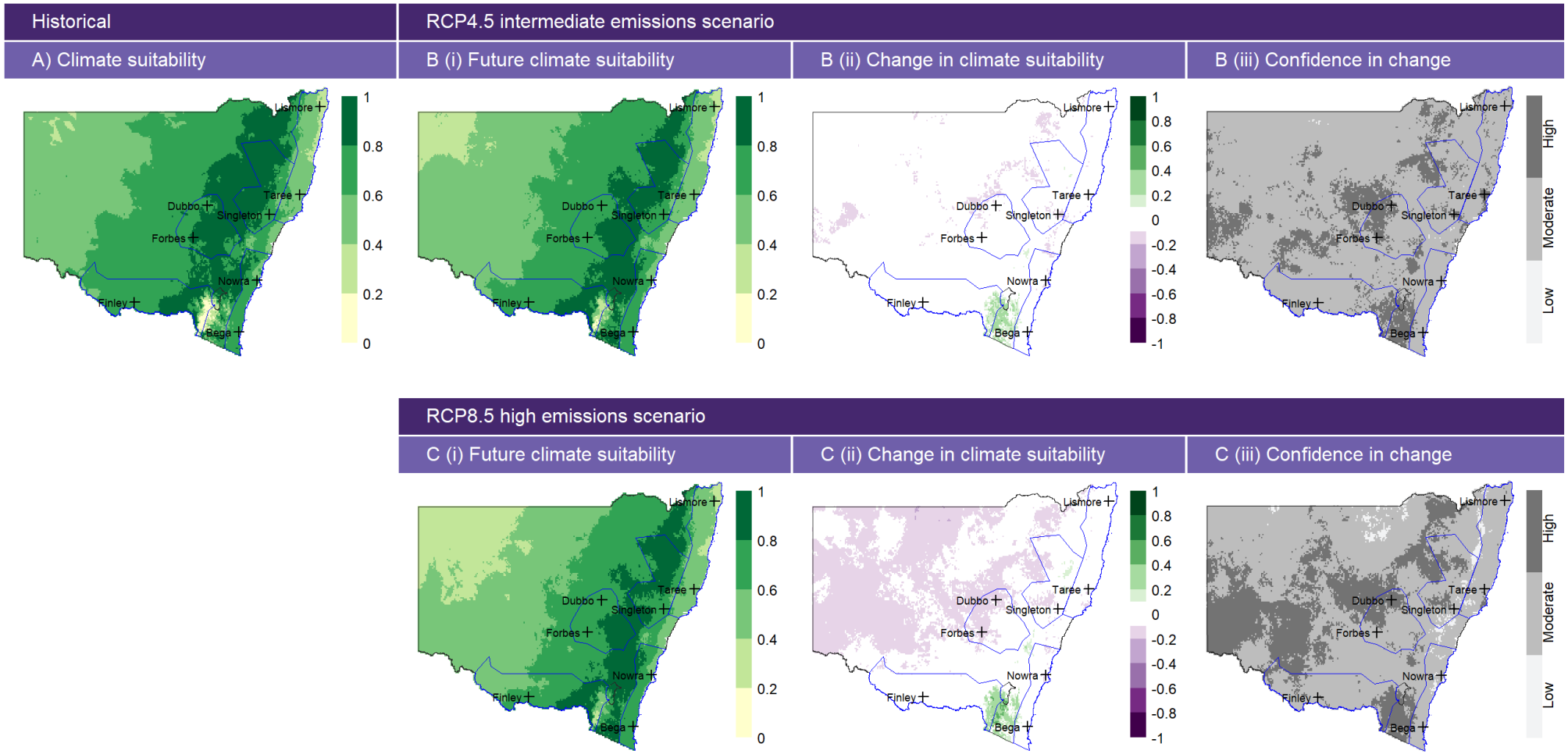


Figure A45: May climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

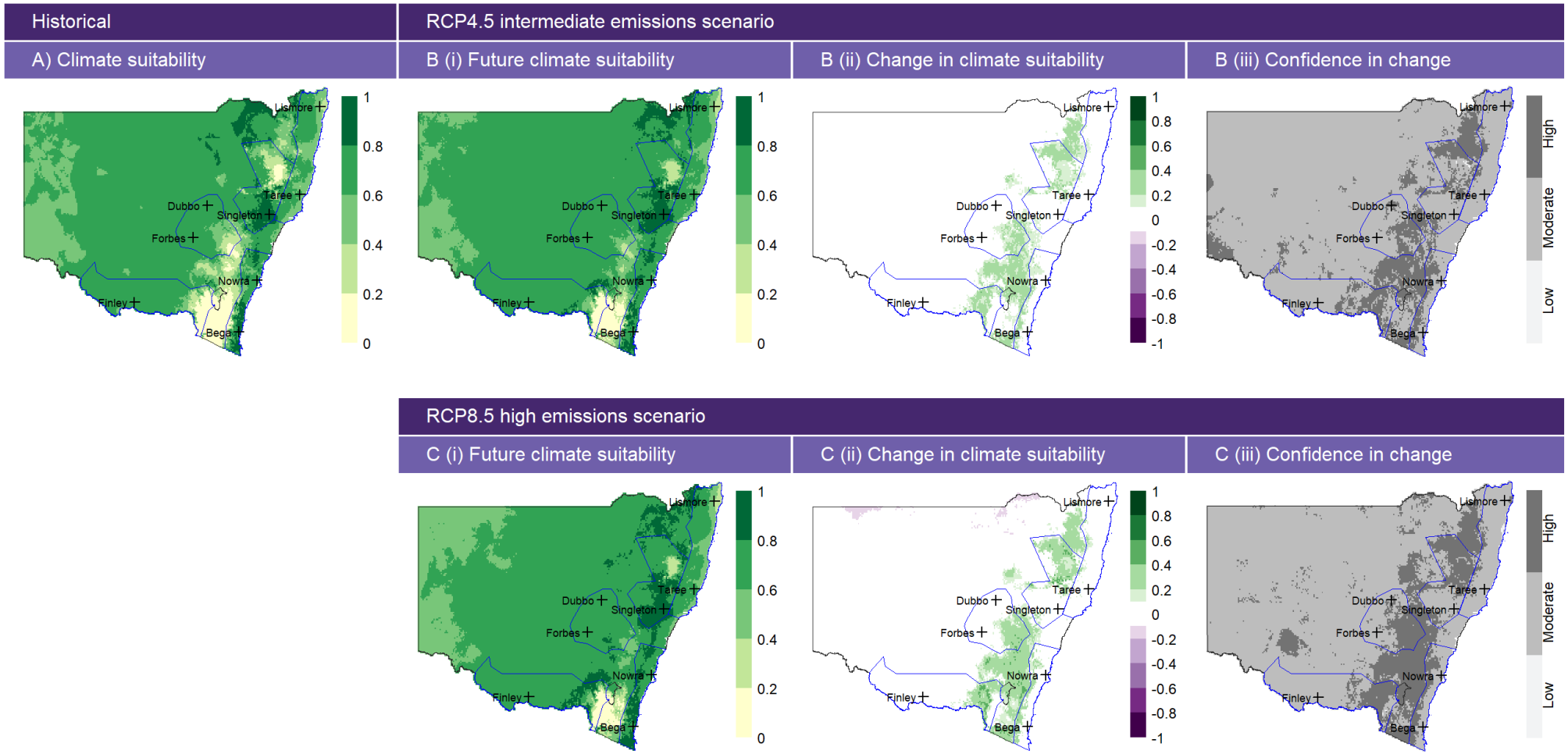


Figure A46: June climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

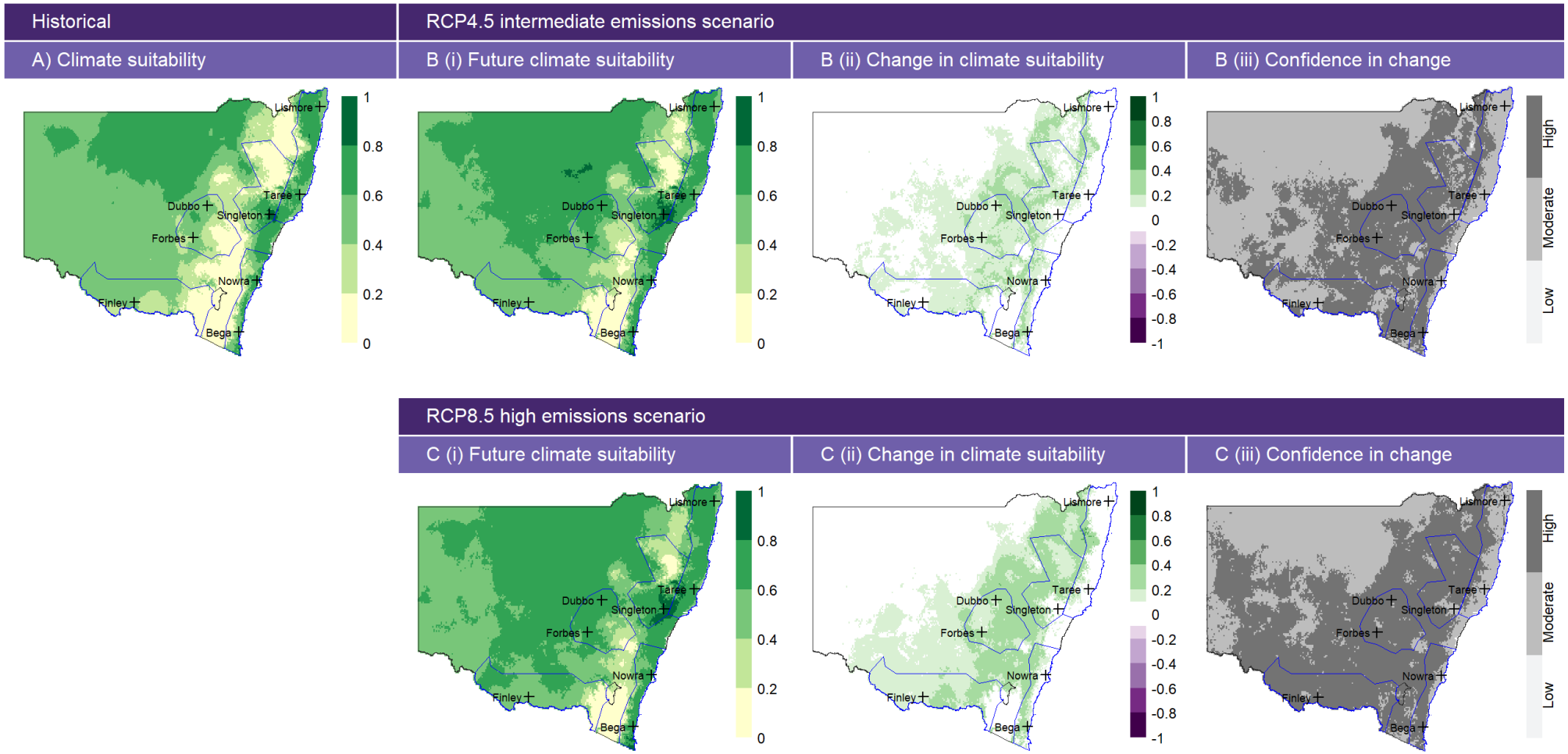


Figure A47: July climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

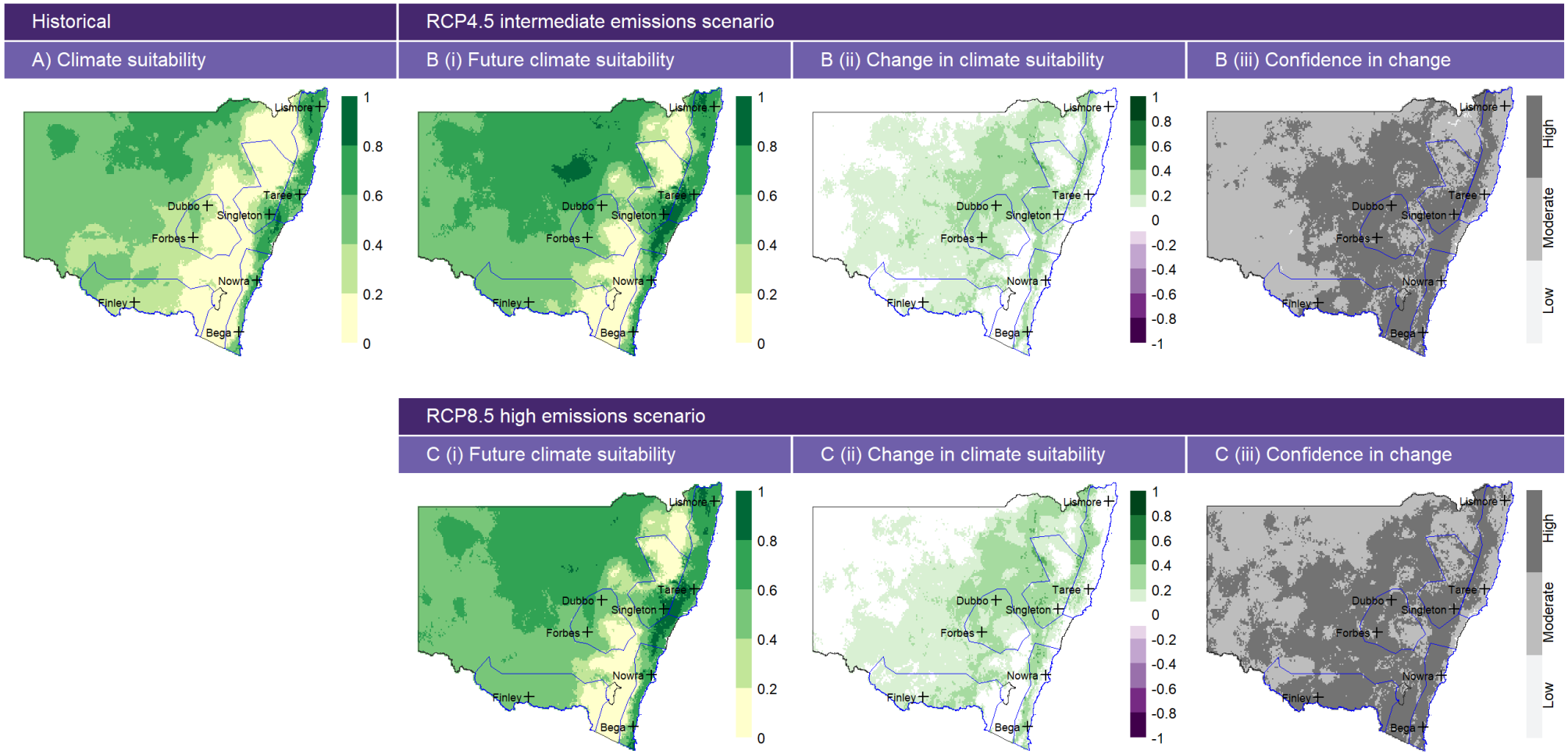


Figure A48: August climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

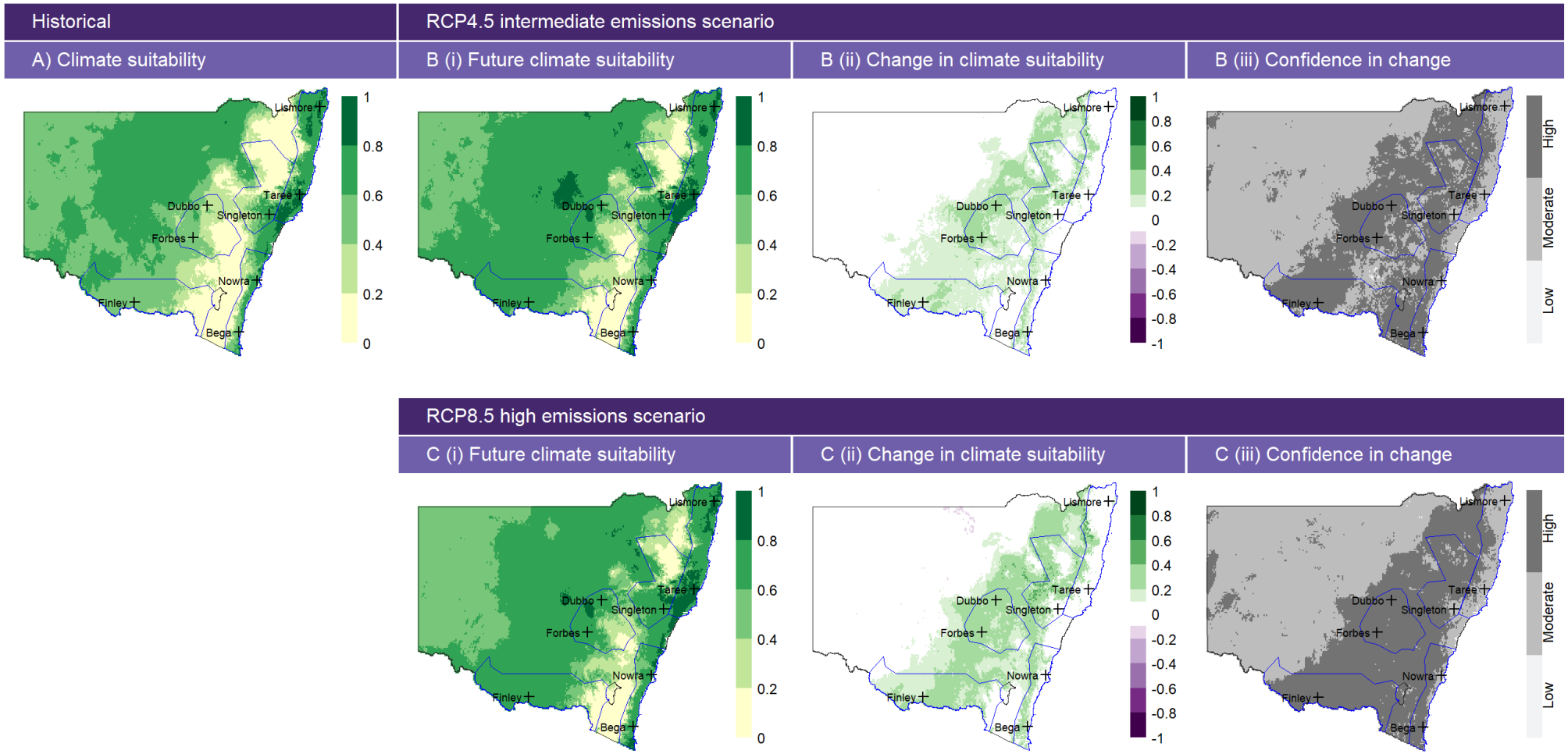


Figure A49: September climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

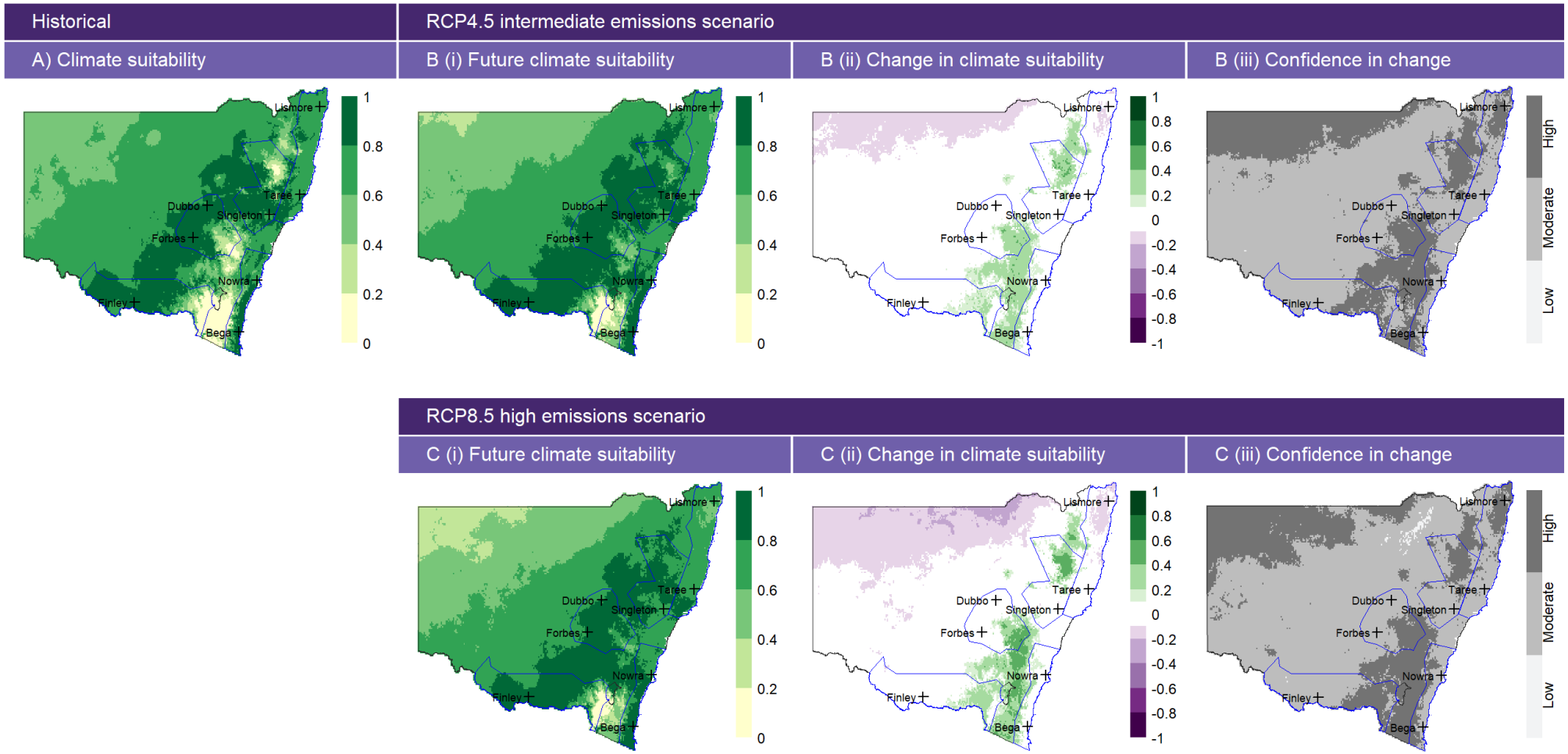


Figure A50: October climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

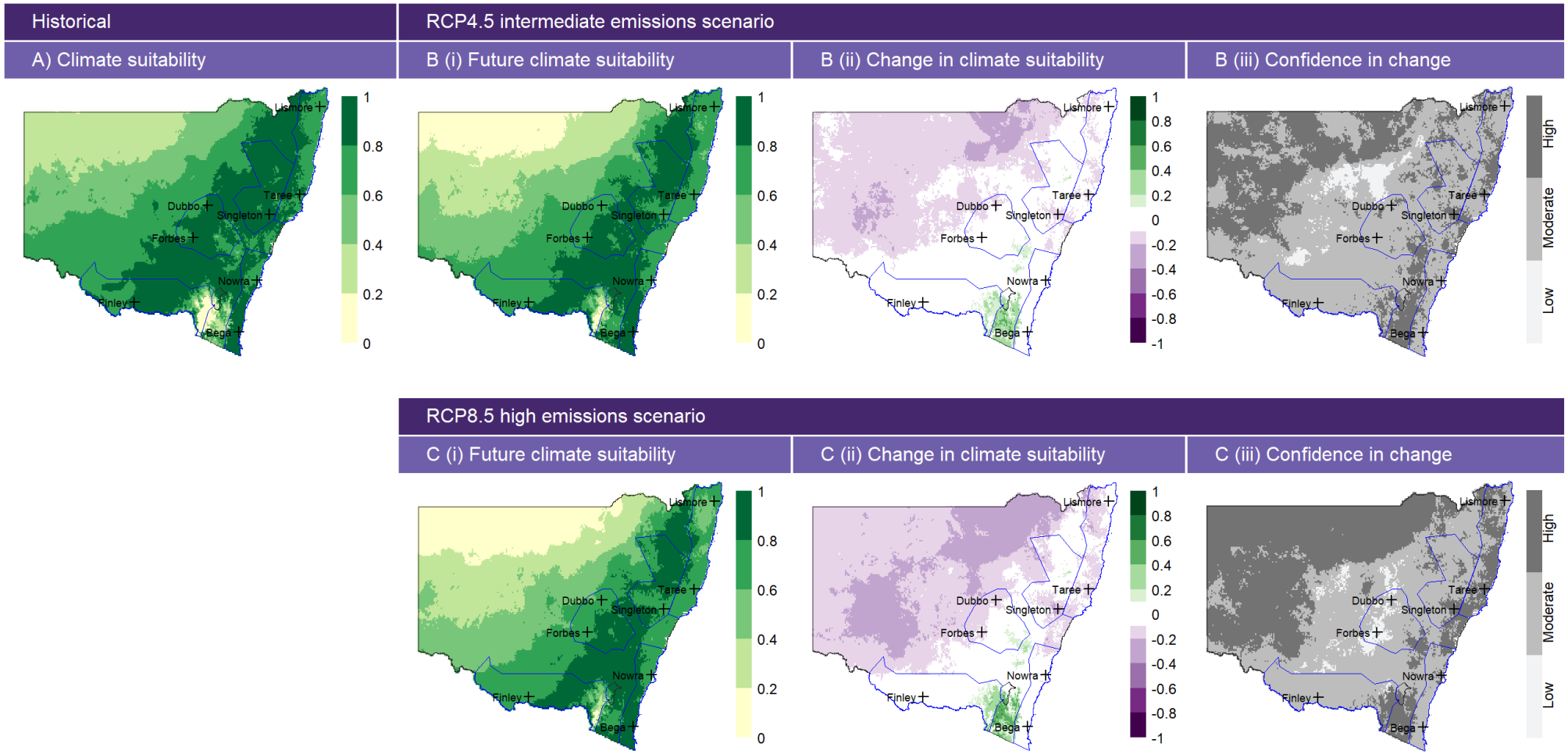


Figure A51: November climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

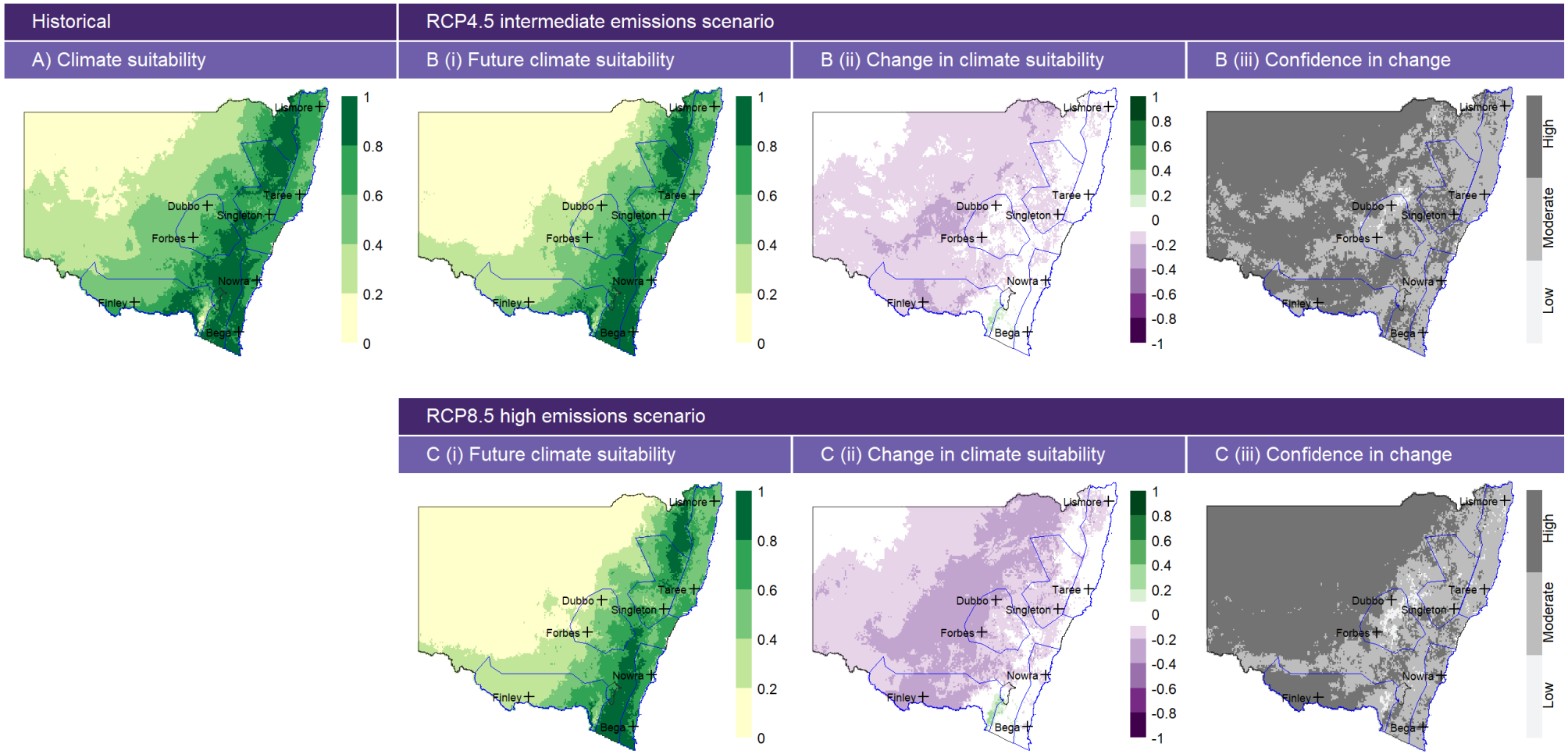


Figure A52: December climate suitability for lucerne.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

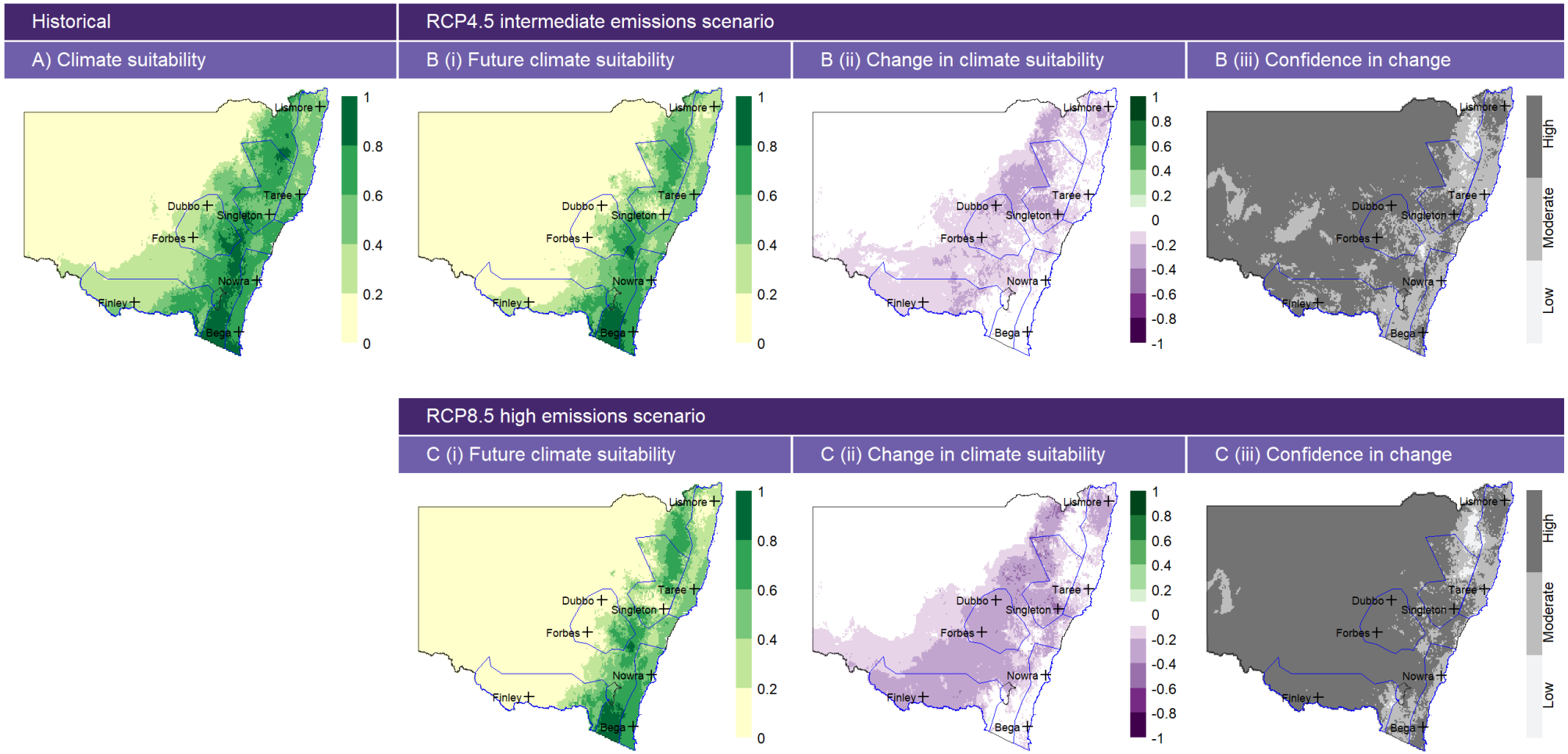
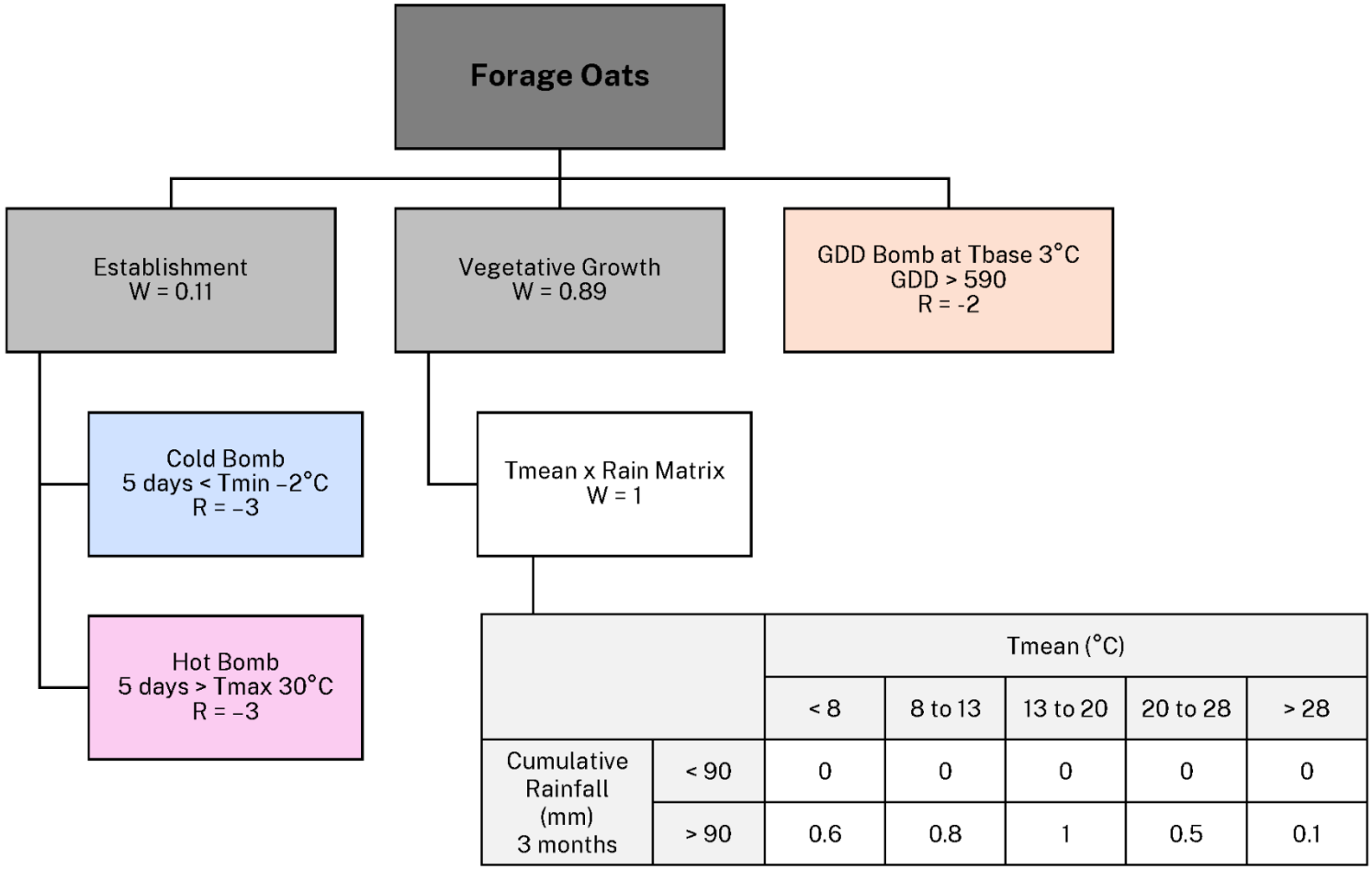


Figure A53: Forage Oats MCA model structure.

MCA model hierarchical structure and model components for forage oats pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)				
		< 8	8 to 13	13 to 20	20 to 28	> 28
Cumulative Rainfall (mm) 3 months	< 90	0	0	0	0	0
	> 90	0.6	0.8	1	0.5	0.1

Figure A54: January climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

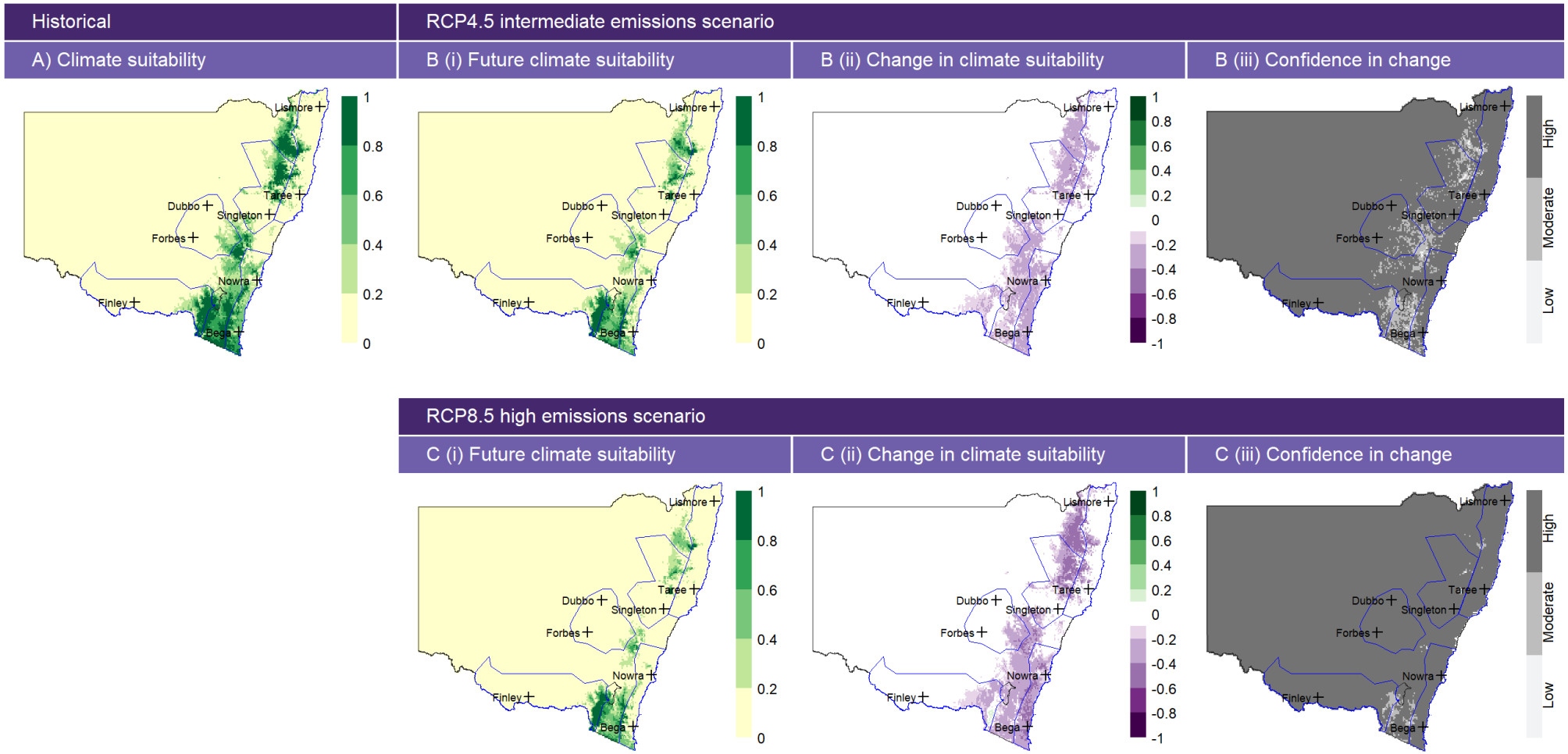


Figure A55: February climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

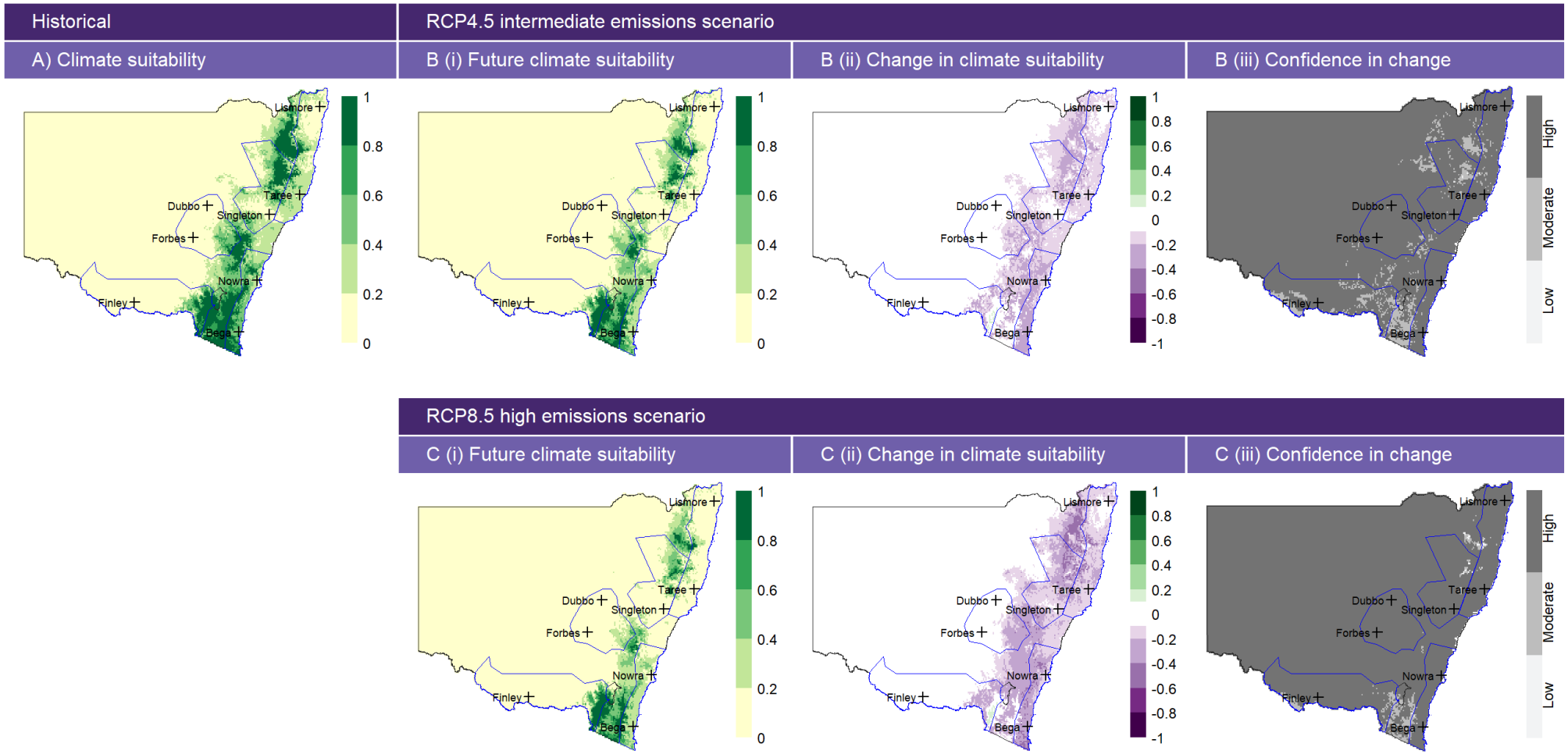


Figure A56: March climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

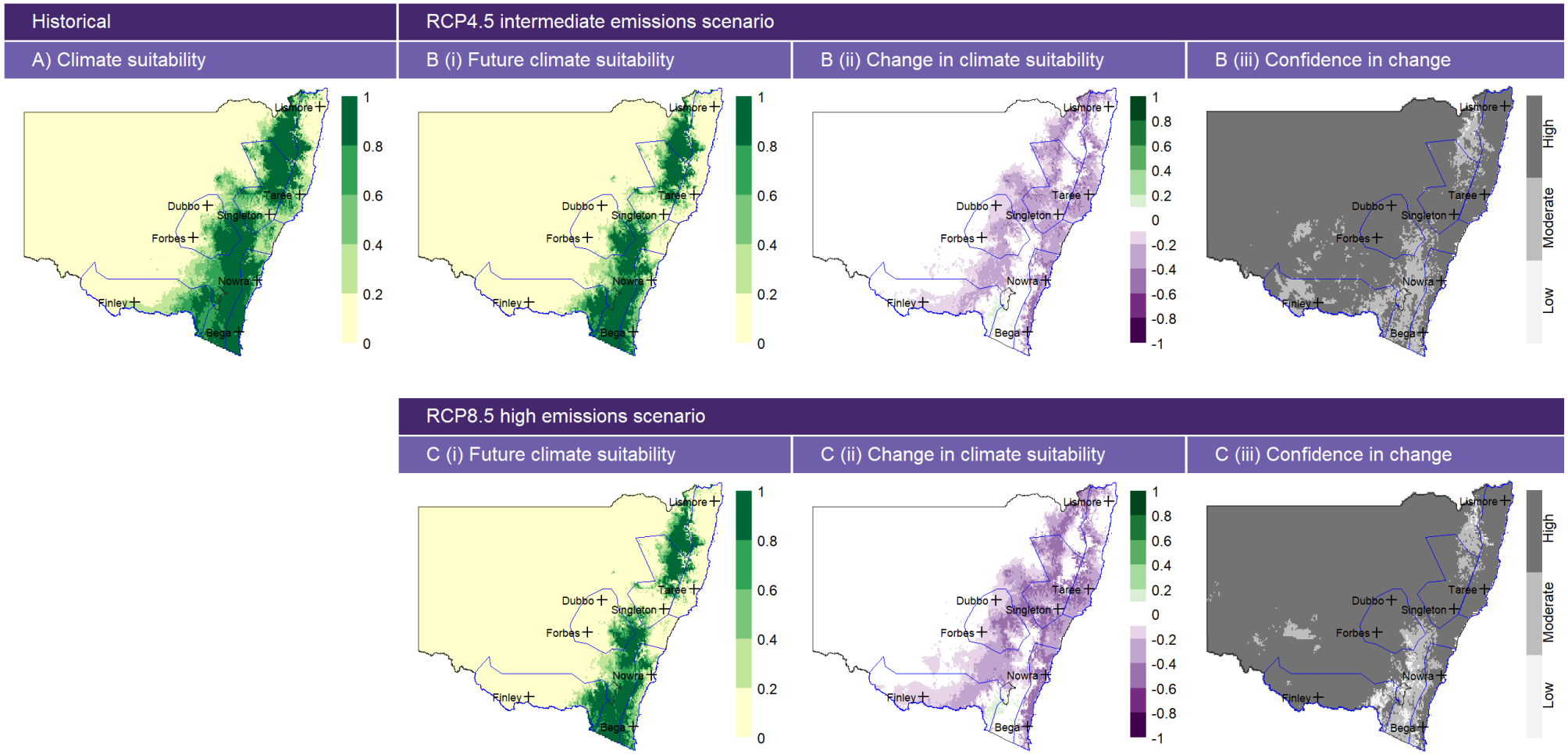


Figure A57: April climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

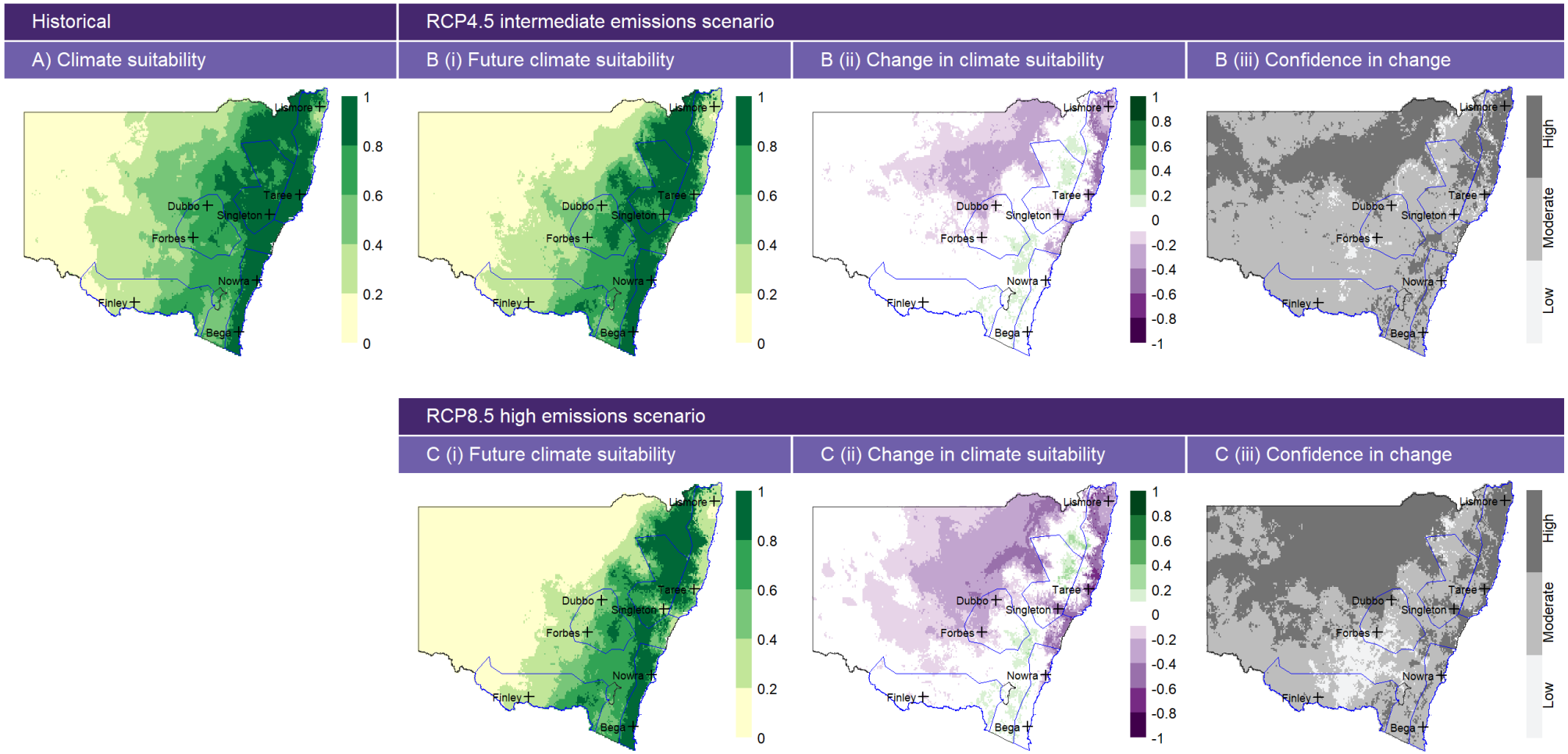


Figure A58: May climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

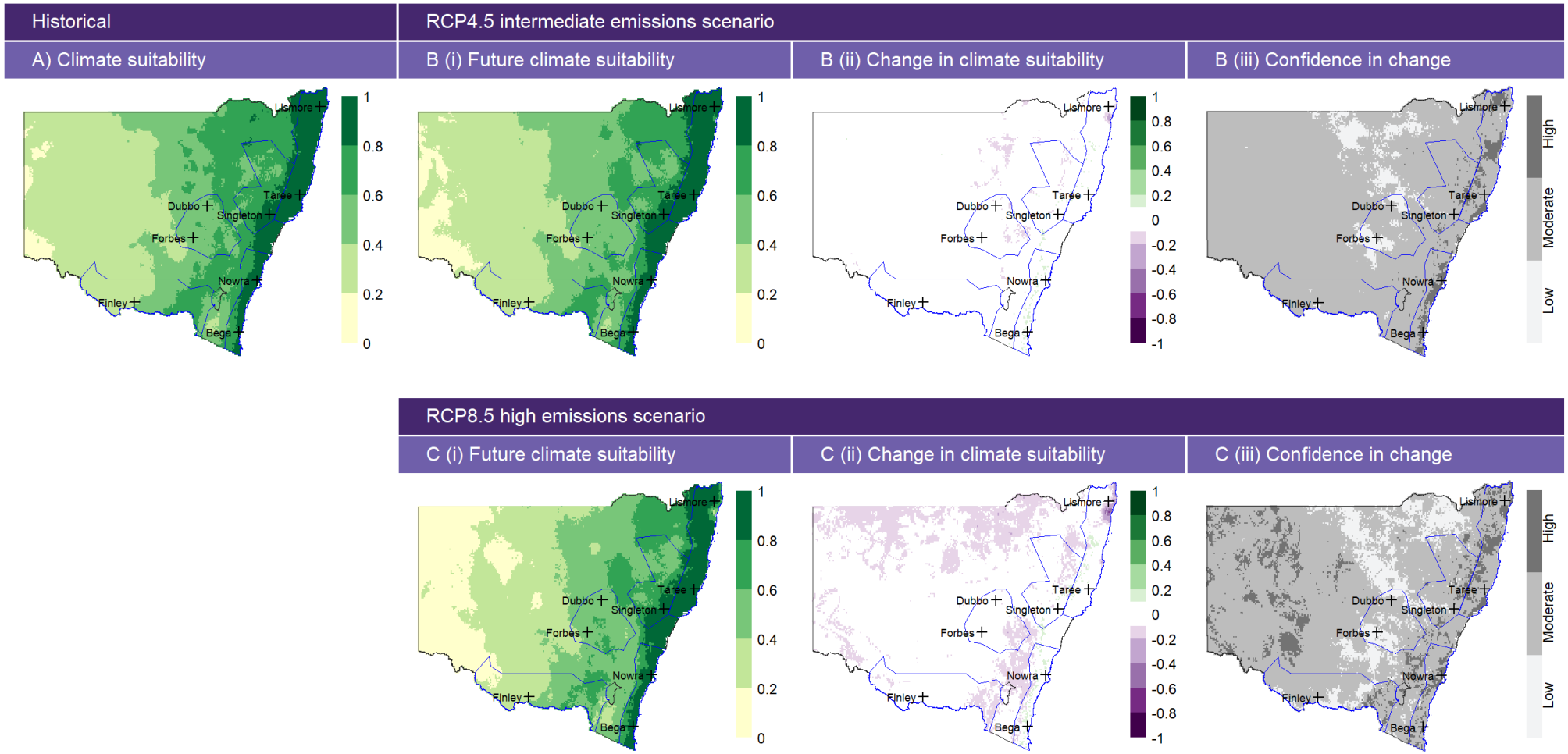


Figure A59: June climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

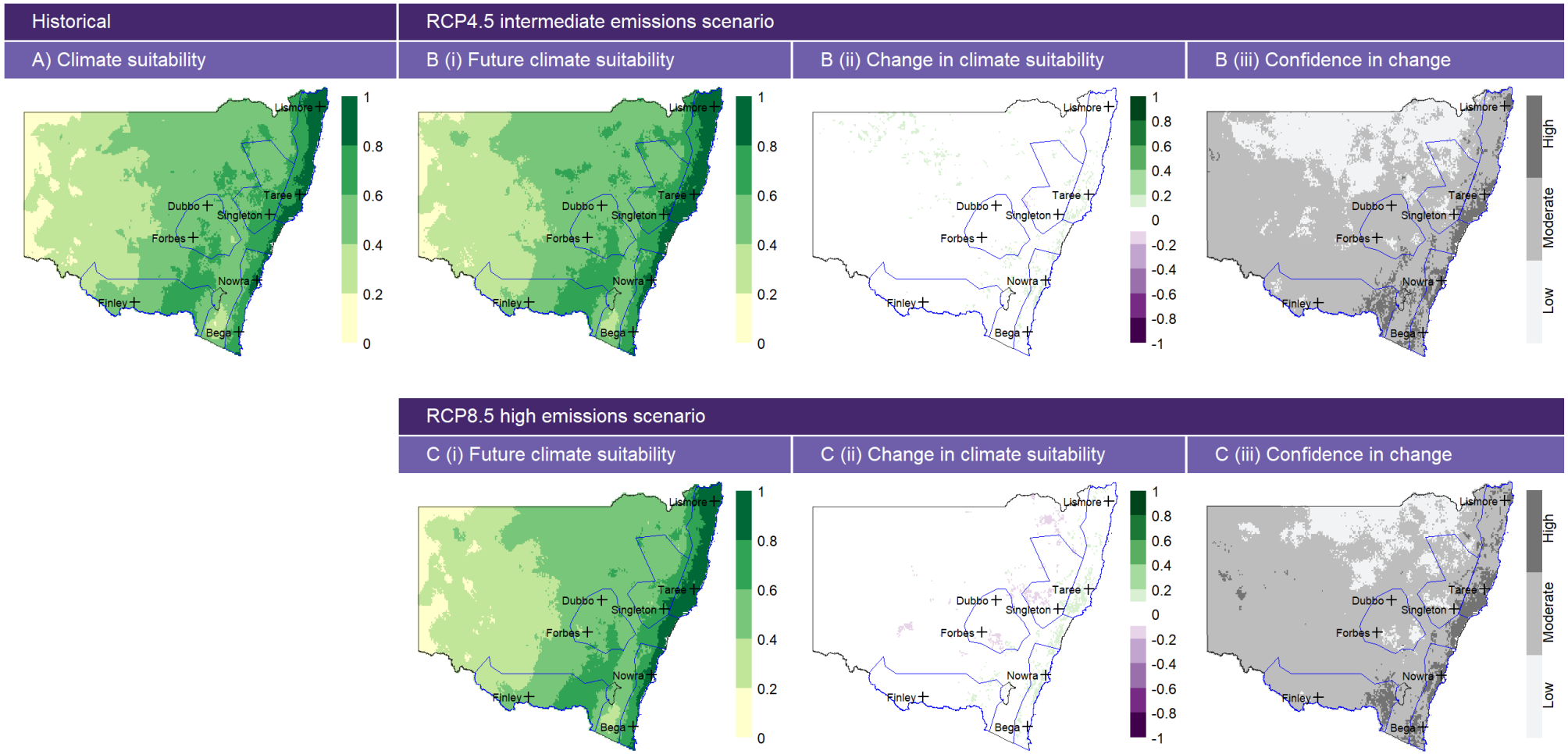


Figure A60: July climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

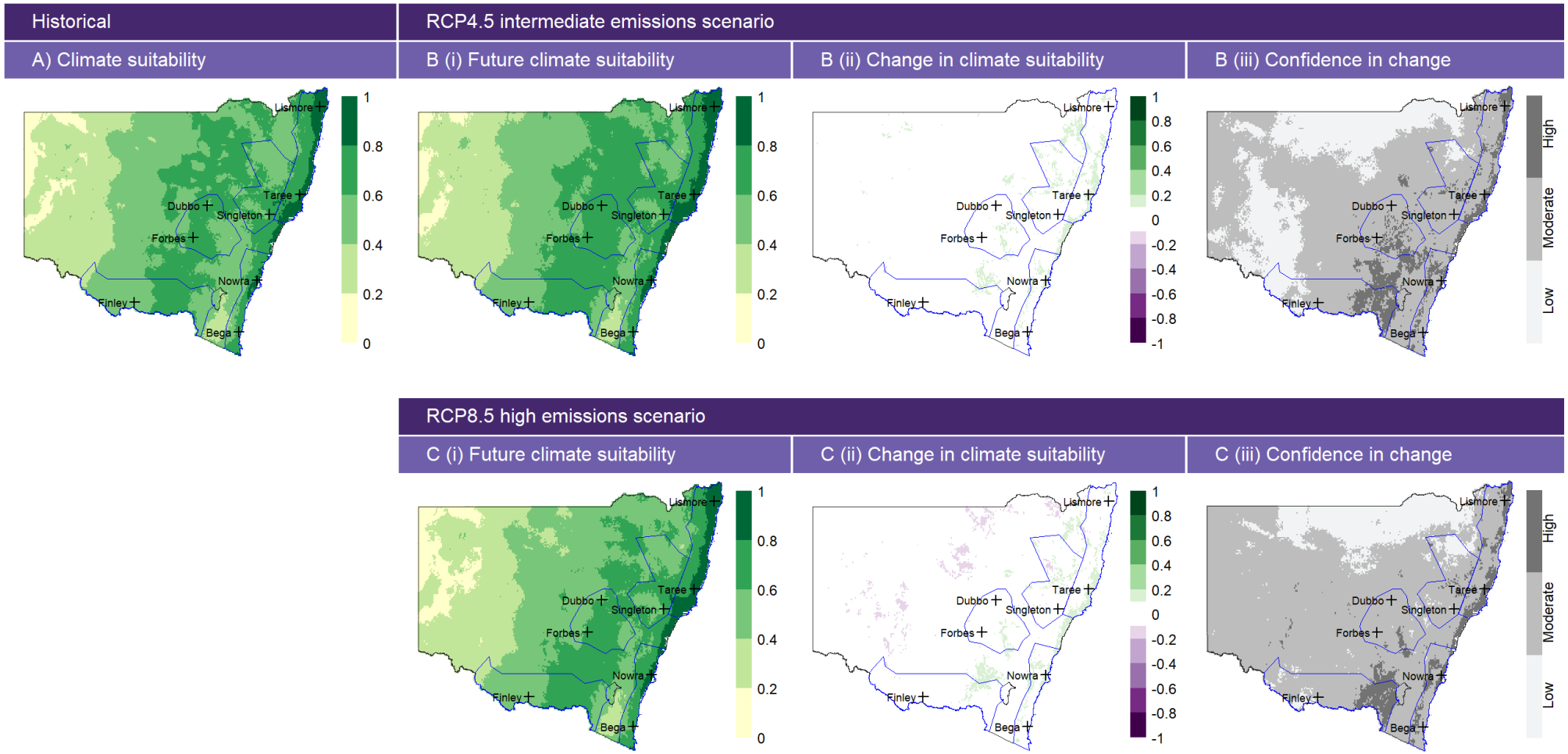


Figure A61: August climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

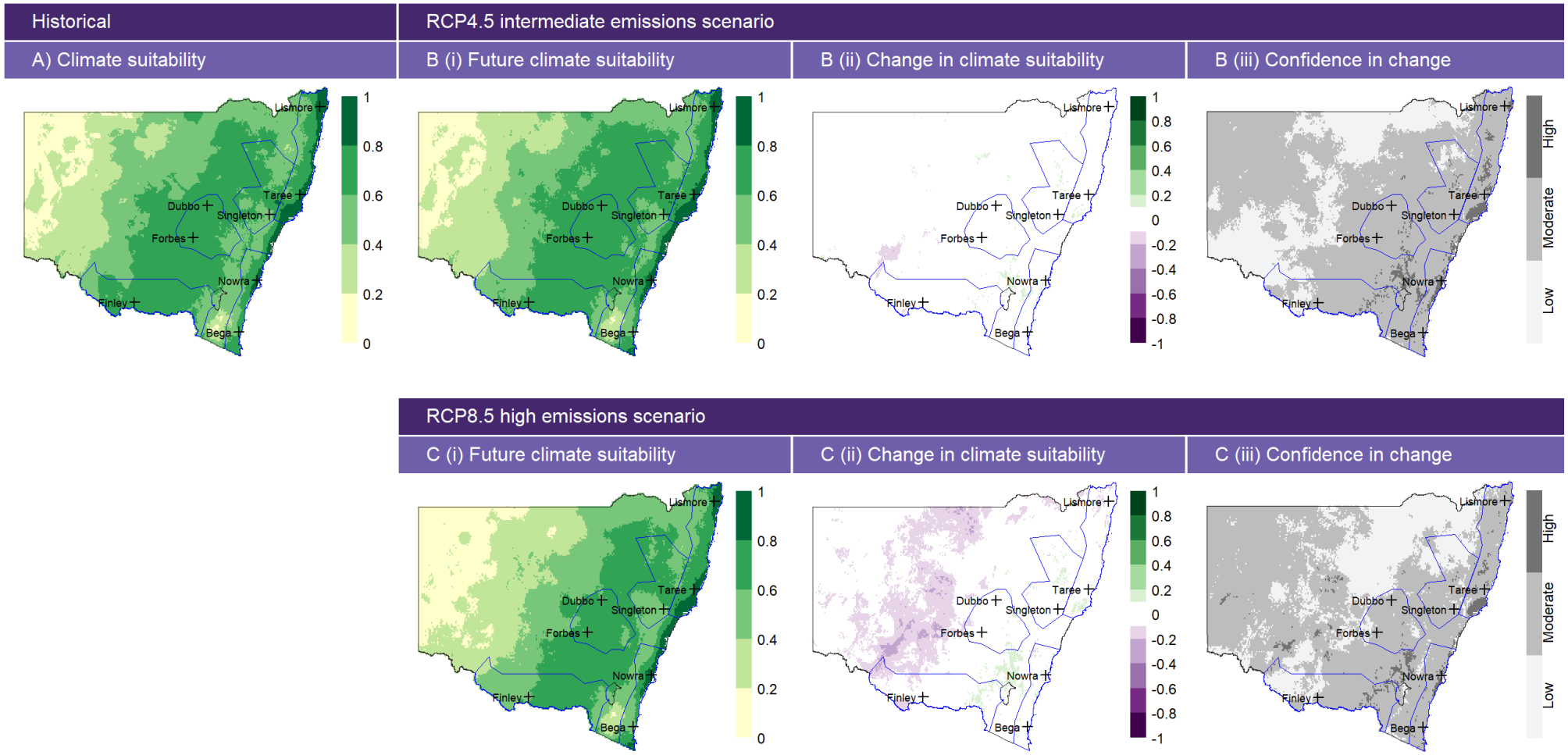


Figure A62: September climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

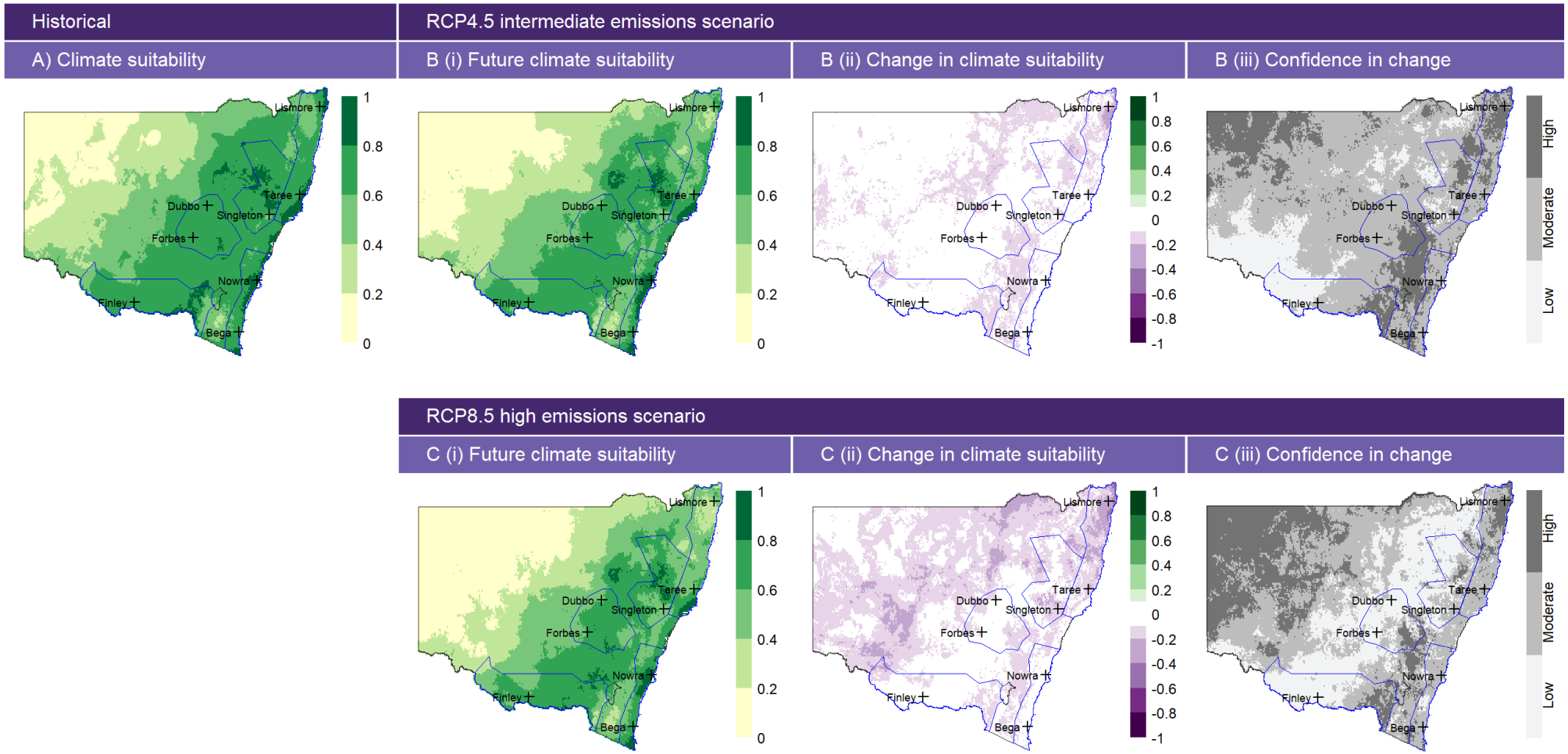


Figure A63: October climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

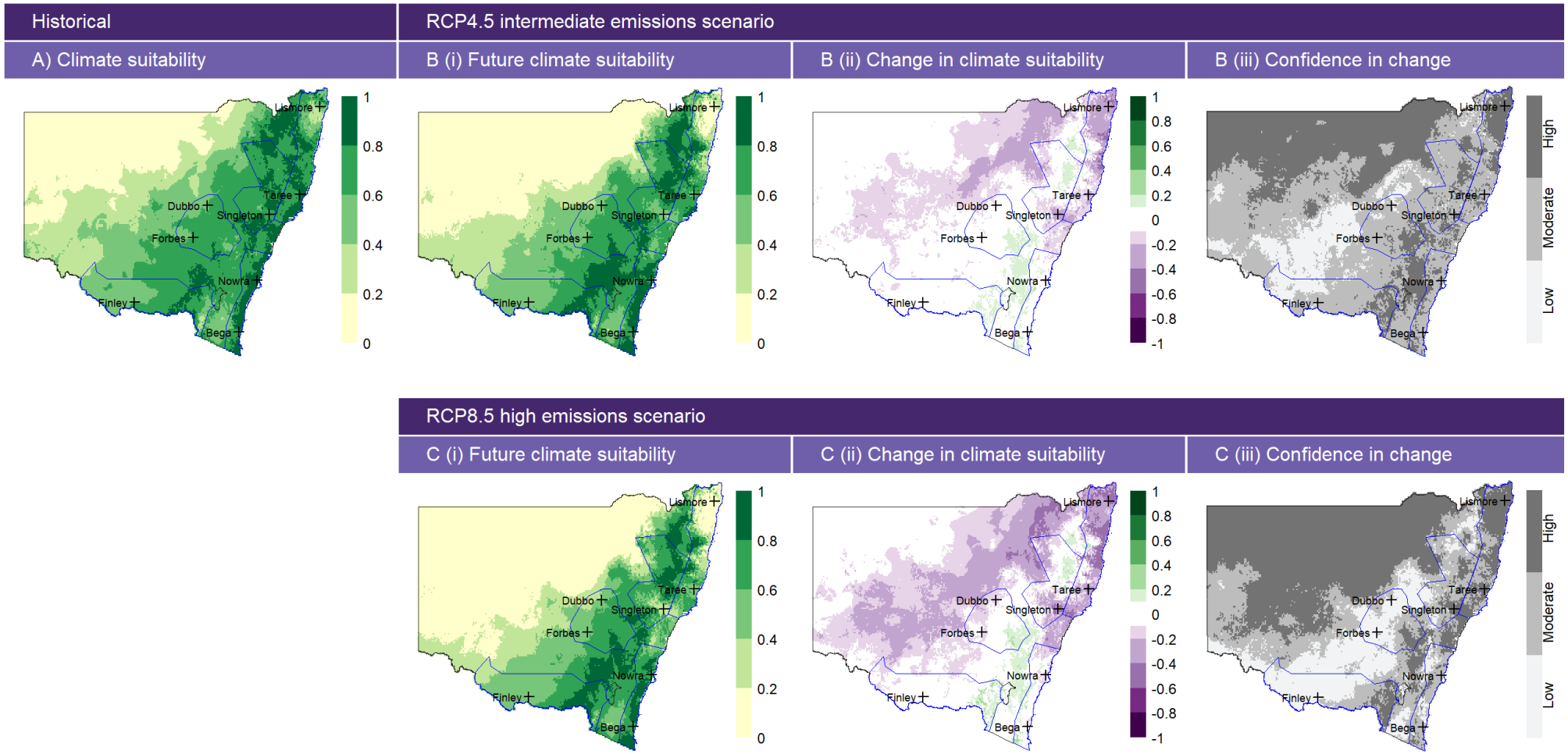


Figure A64: November climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

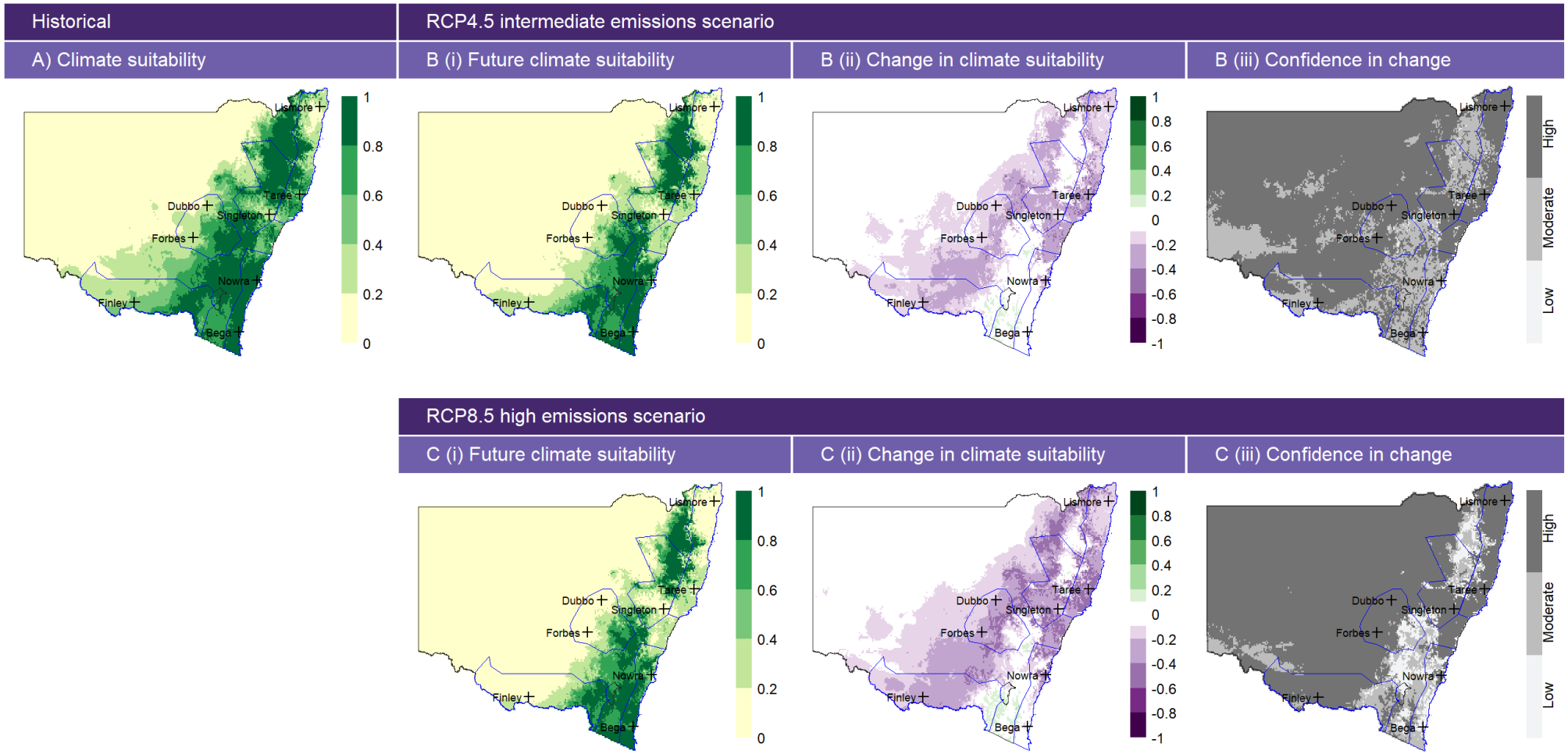


Figure A65: December climate suitability for forage oats.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

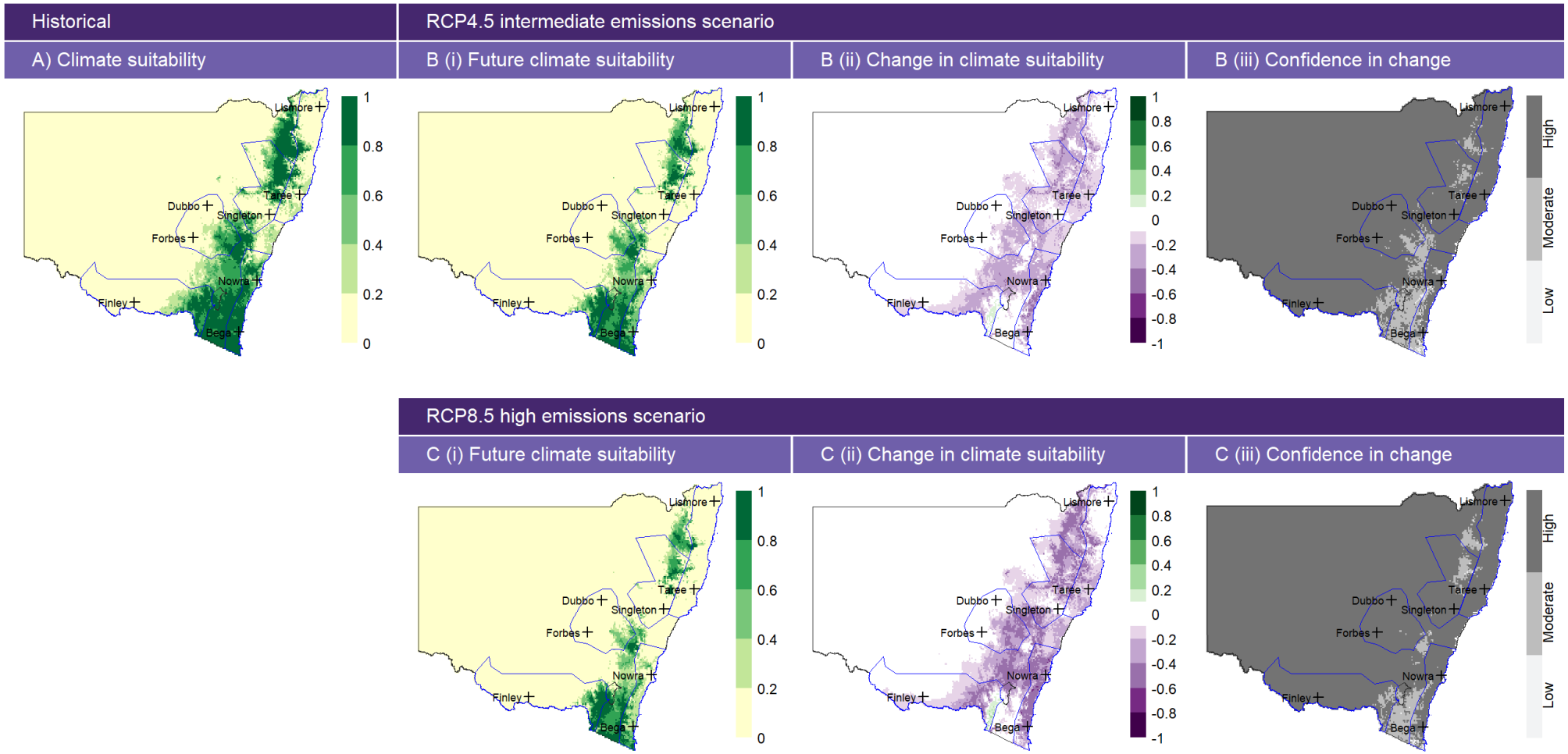
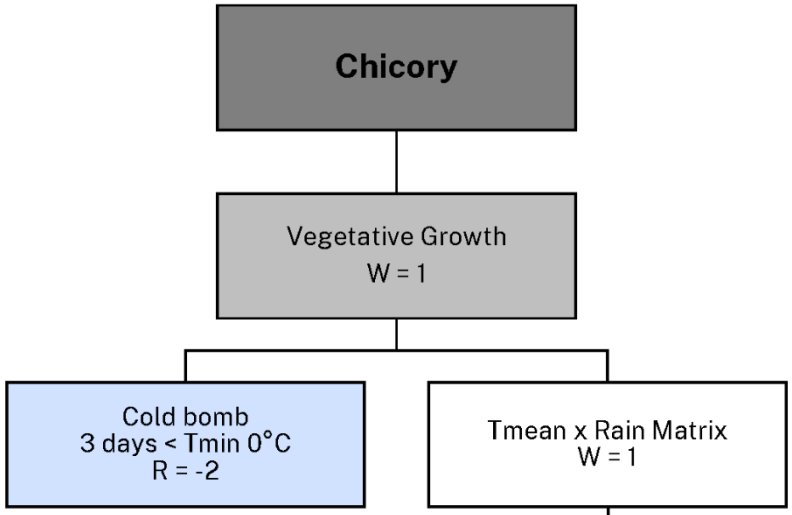


Figure A66: Chicory MCA model structure.

MCA model hierarchical structure and model components for chicory pastures. The top level of the hierarchy is the pasture species. The second level contains the key growth stages identified as climate-sensitive by the literature review and expert judgment. The third level contains the climate variables which affect each growth stage, whilst the fourth level contains the climate variable thresholds.



		Tmean (°C)			
		< 5	5 to 15	15 to 25	> 25
Cumulative Rainfall (mm) 3 months	< 100	0	0	0	0
	100 to 137	0.1	0.2	0.5	0.1
	137 to 162	0.2	0.4	0.8	0.3
	> 162	0.2	0.8	1	0.5

Figure A67: January climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

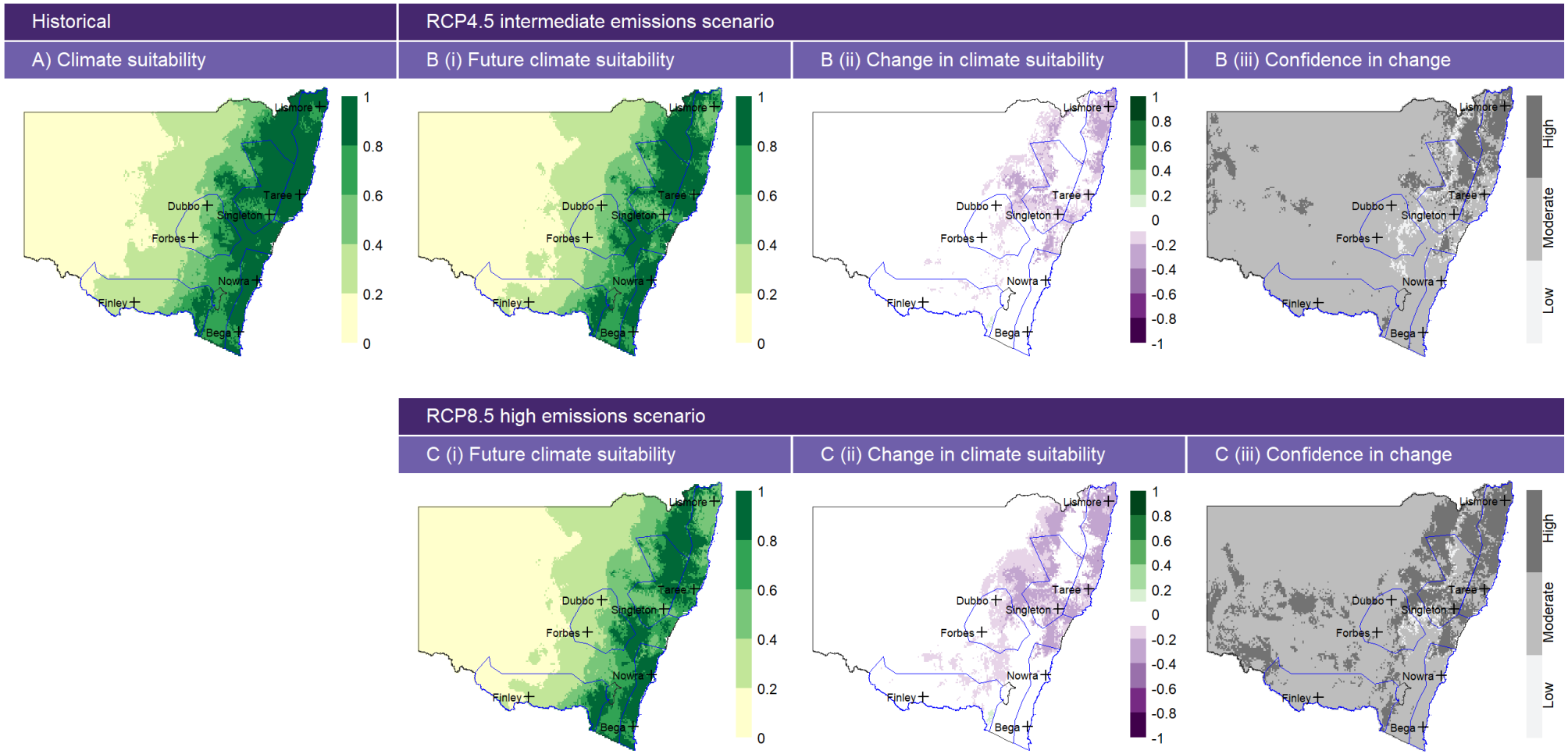


Figure A68: February climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

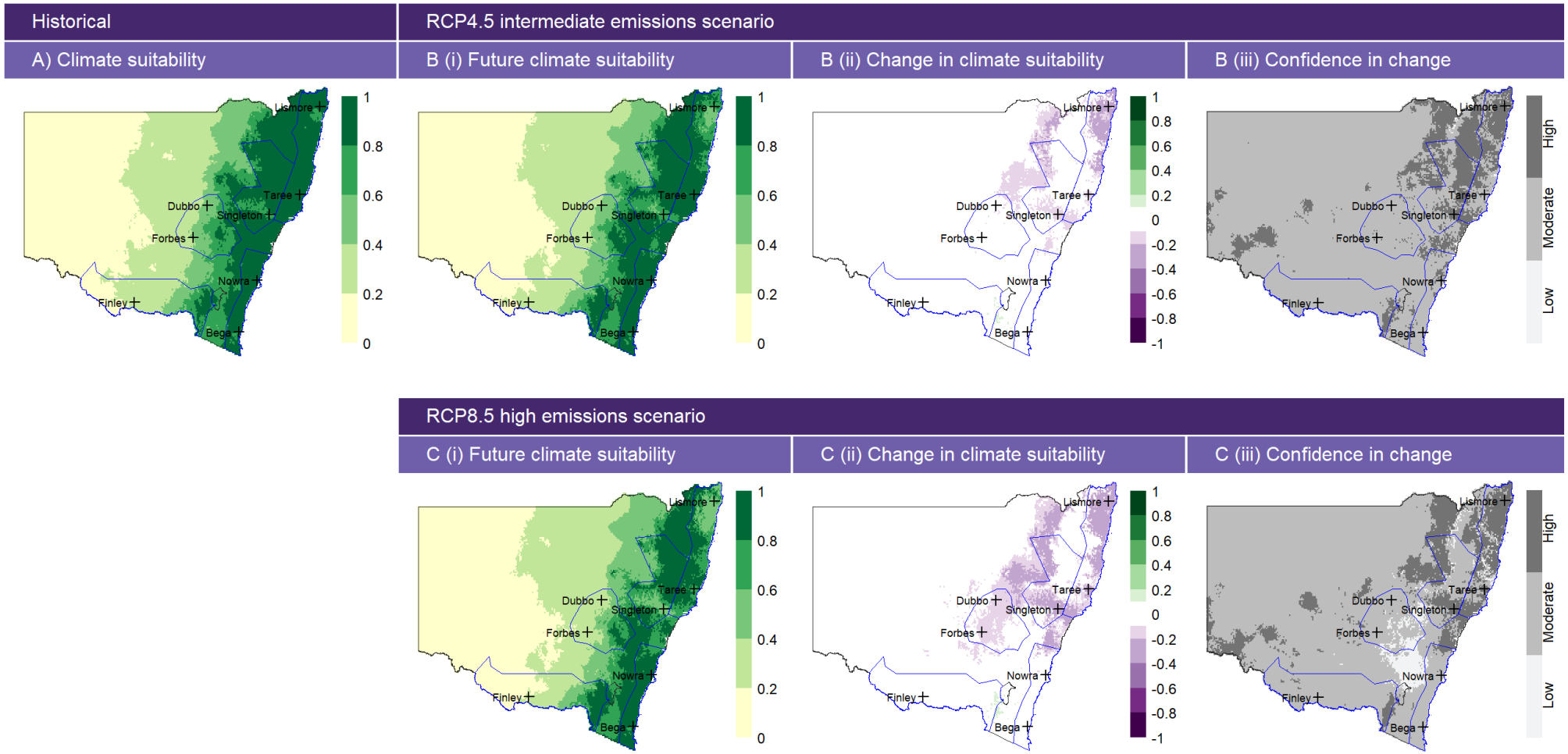


Figure A69: March climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

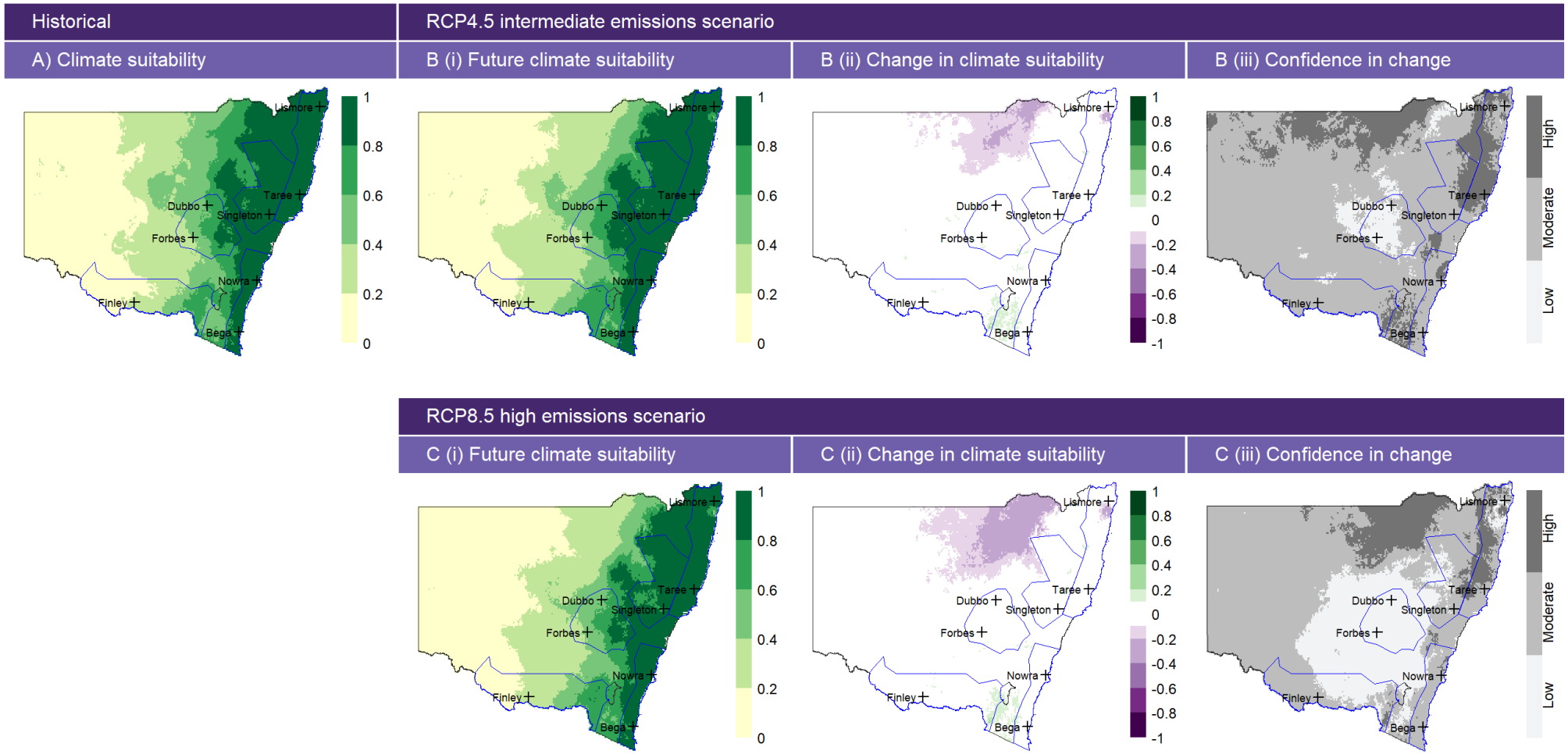


Figure A70: April climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

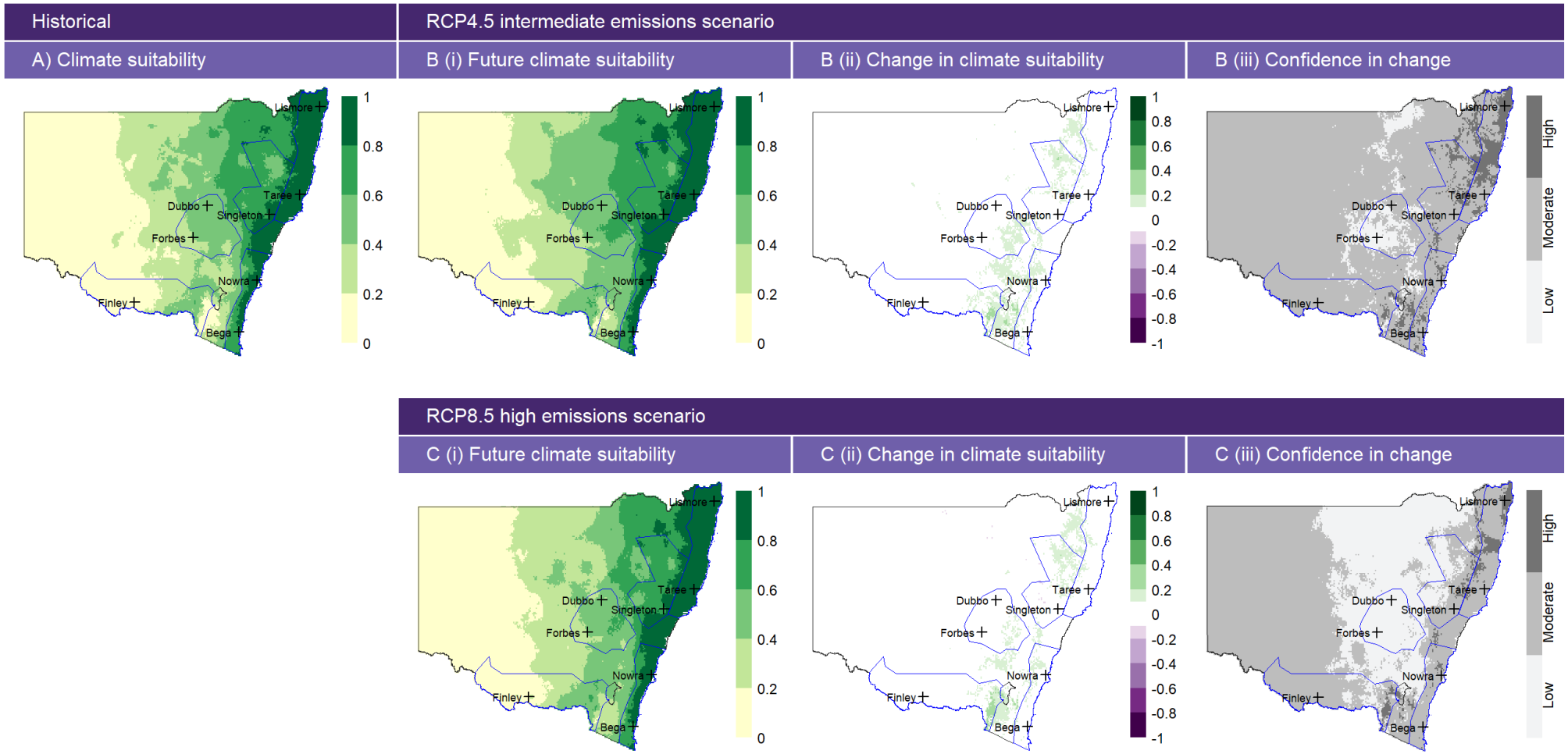


Figure A71: May climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

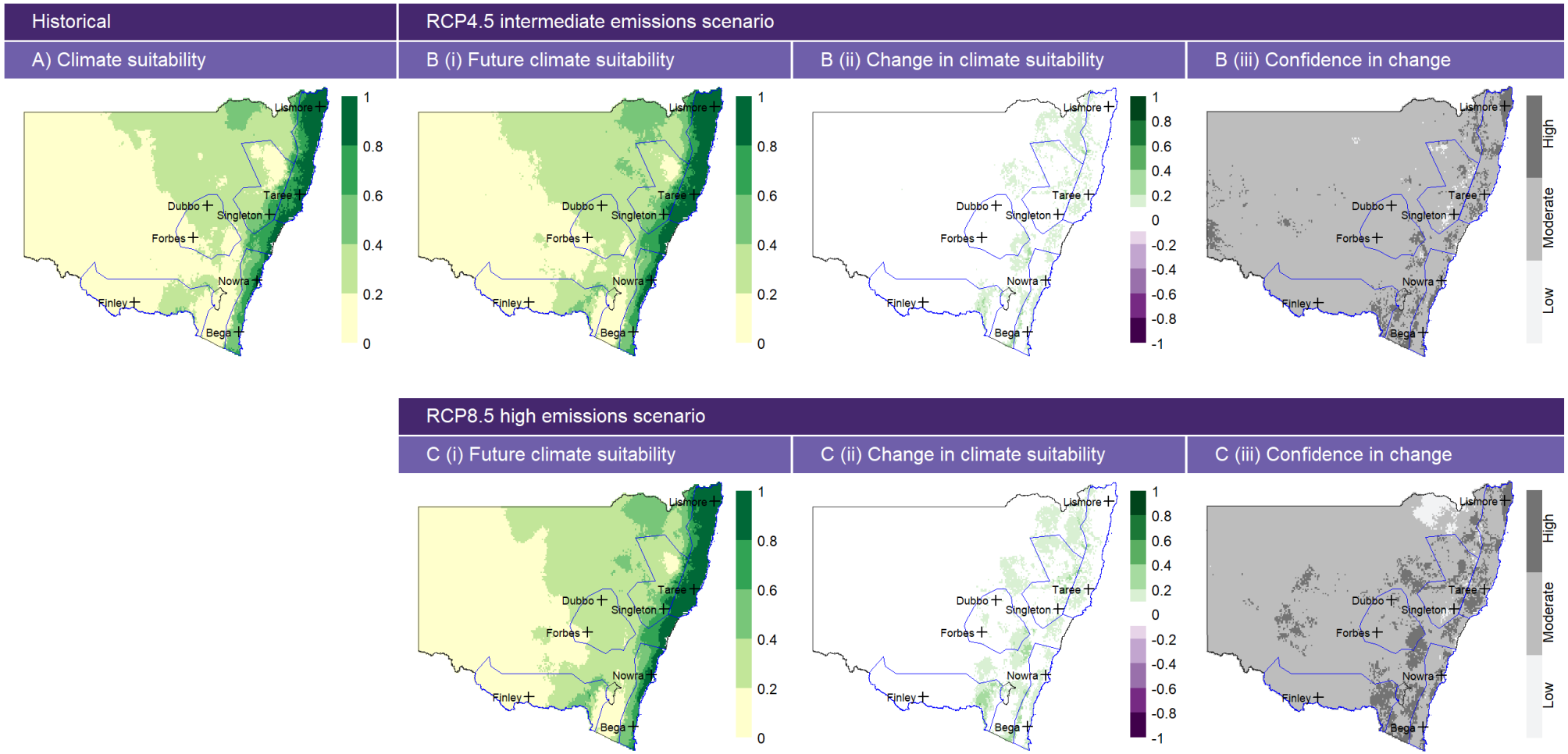


Figure A72: June climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

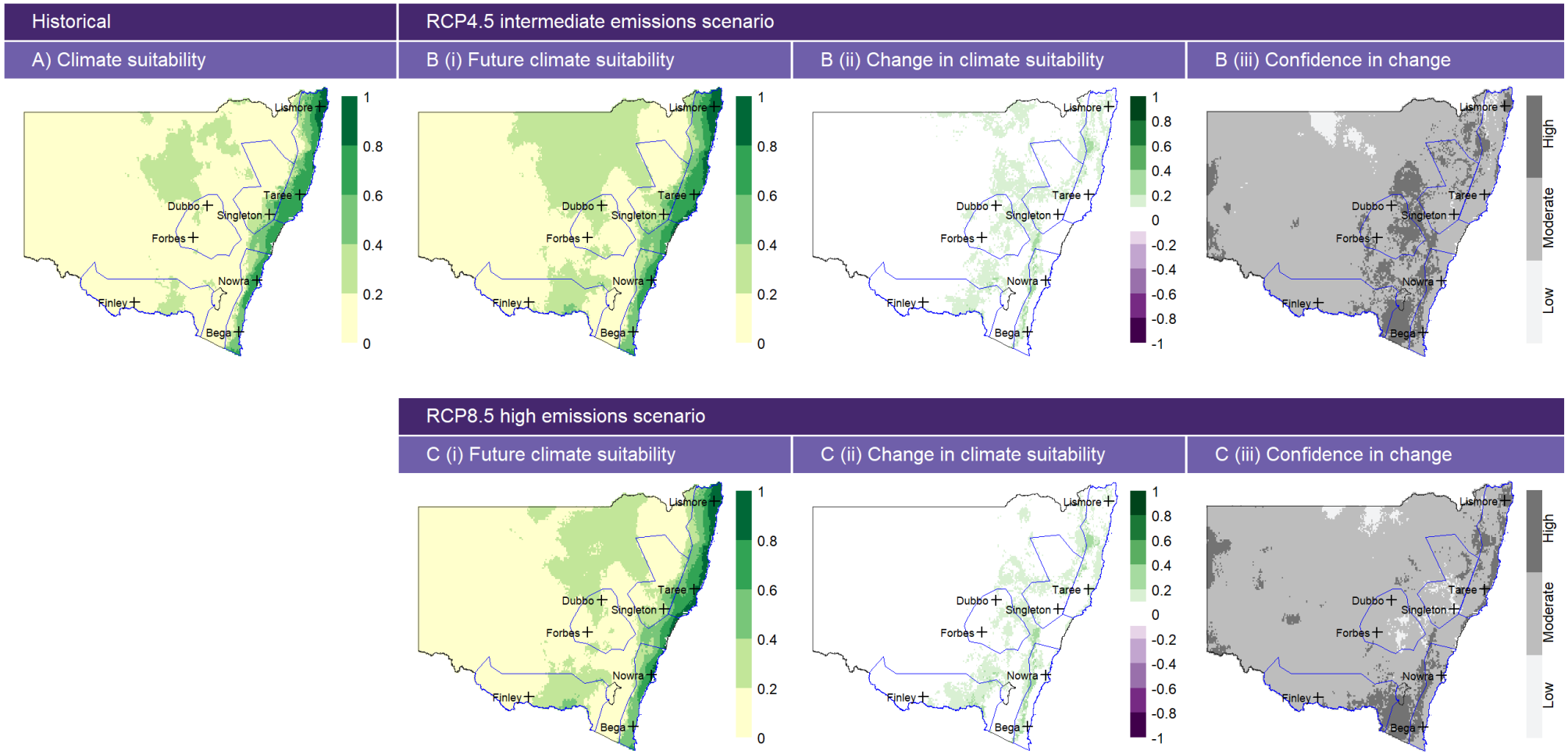


Figure A73: July climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

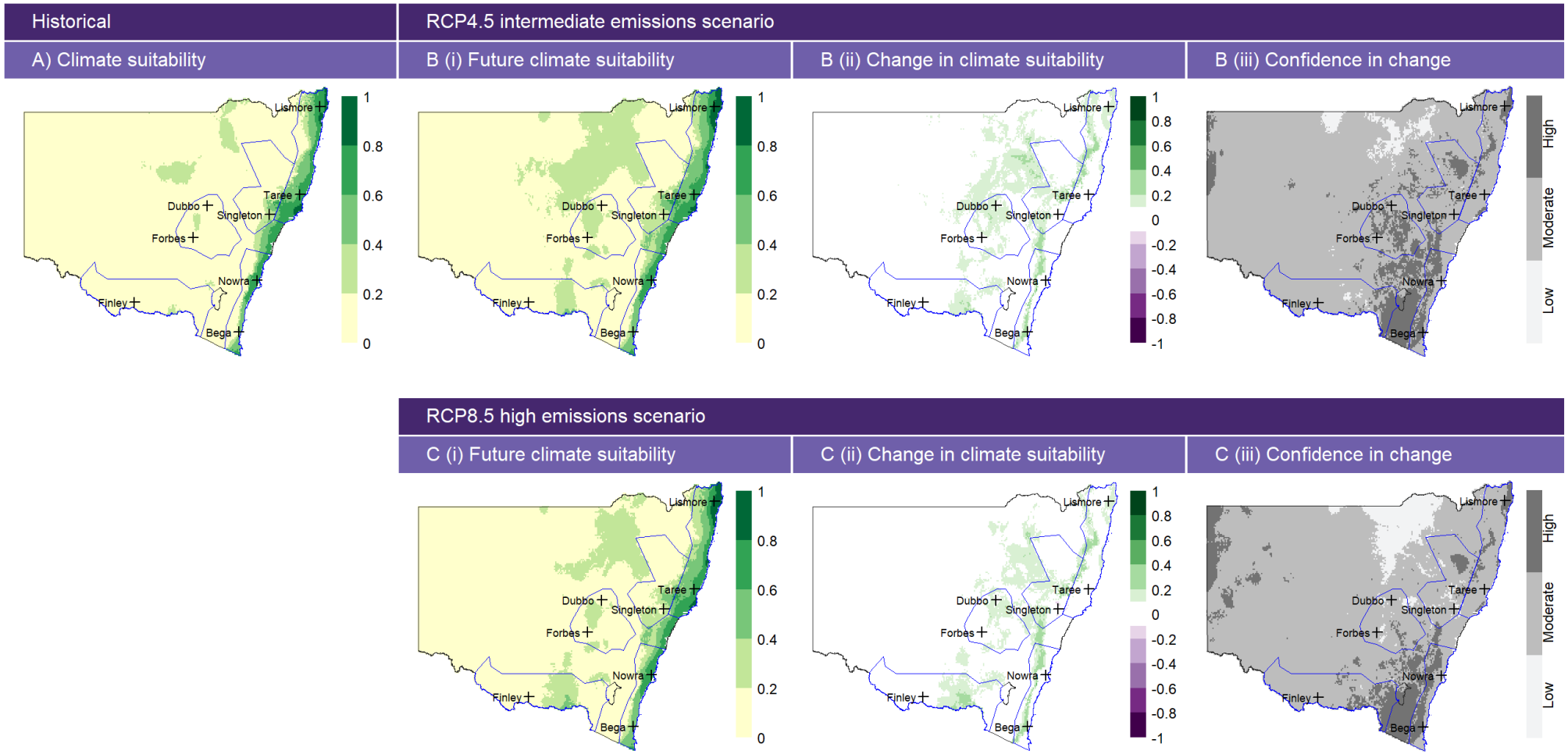


Figure A74: August climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

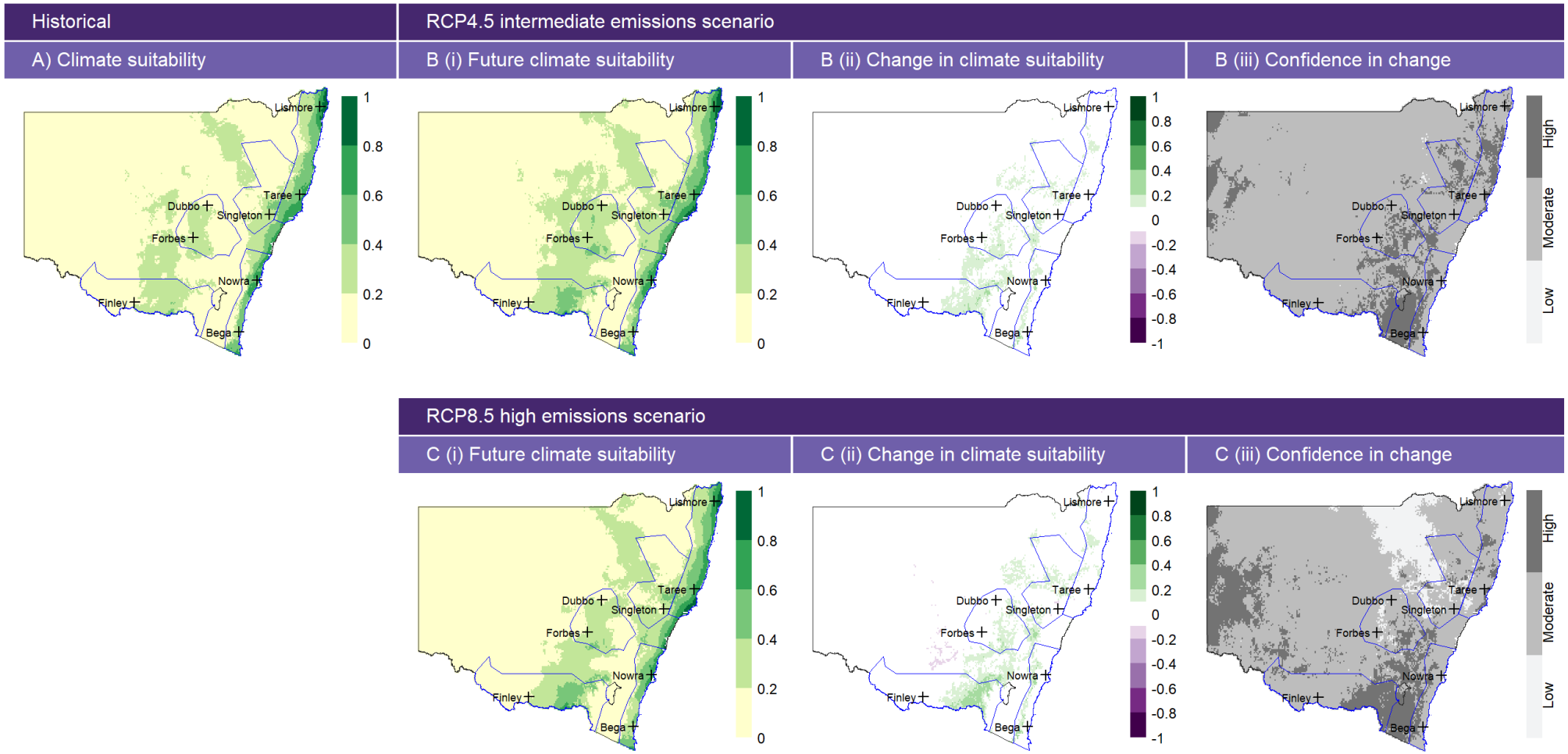


Figure A75: September climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

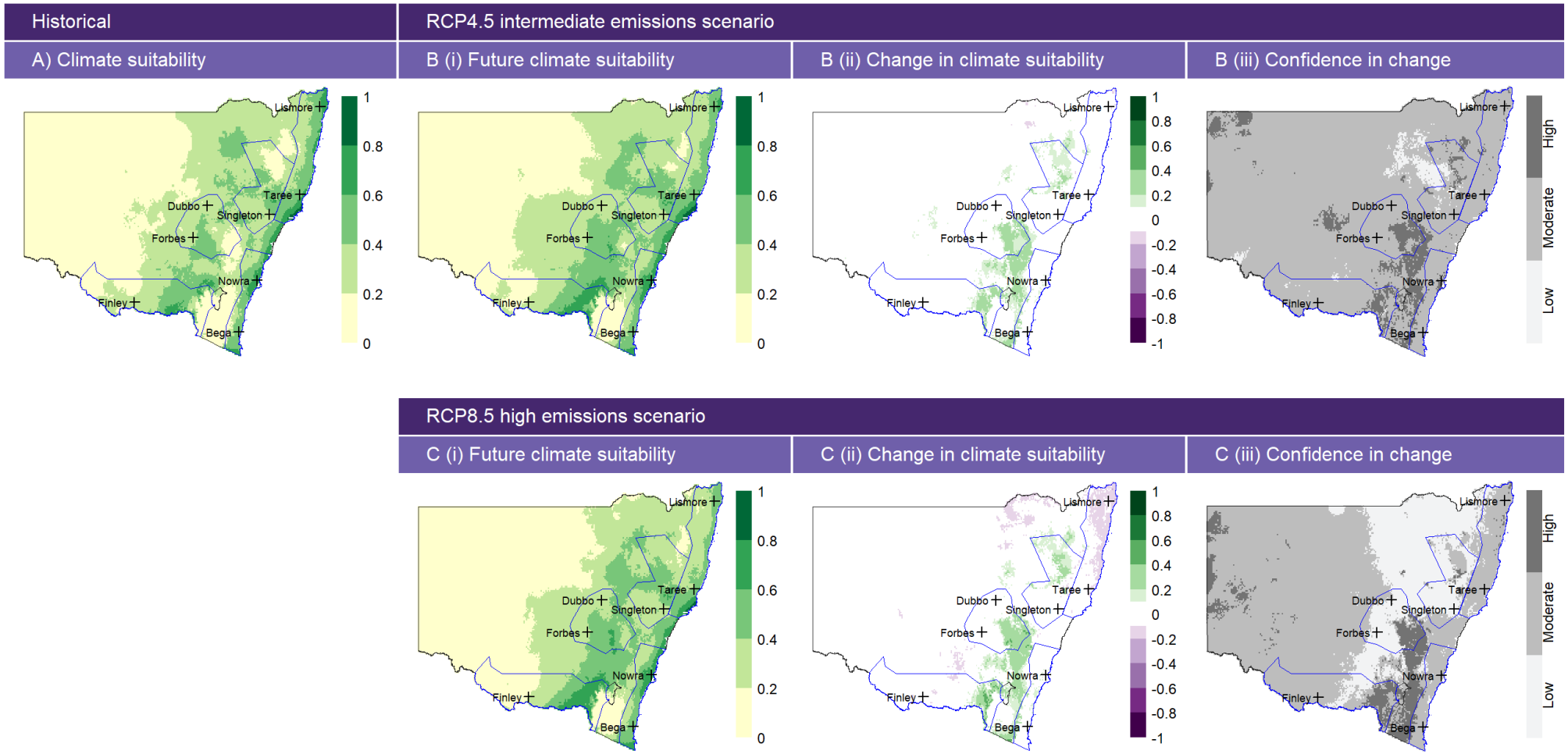


Figure A76: October climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

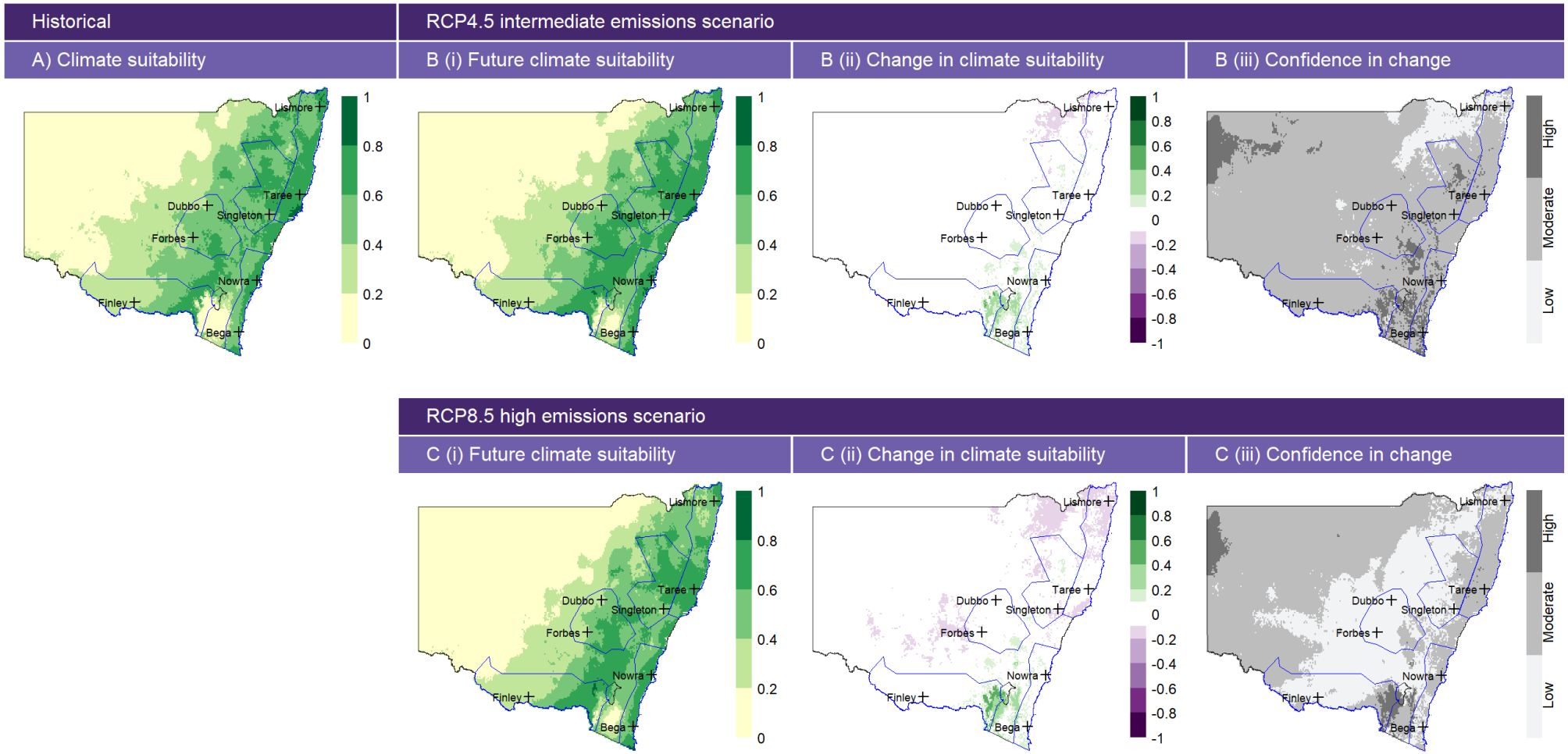


Figure A77: November climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.

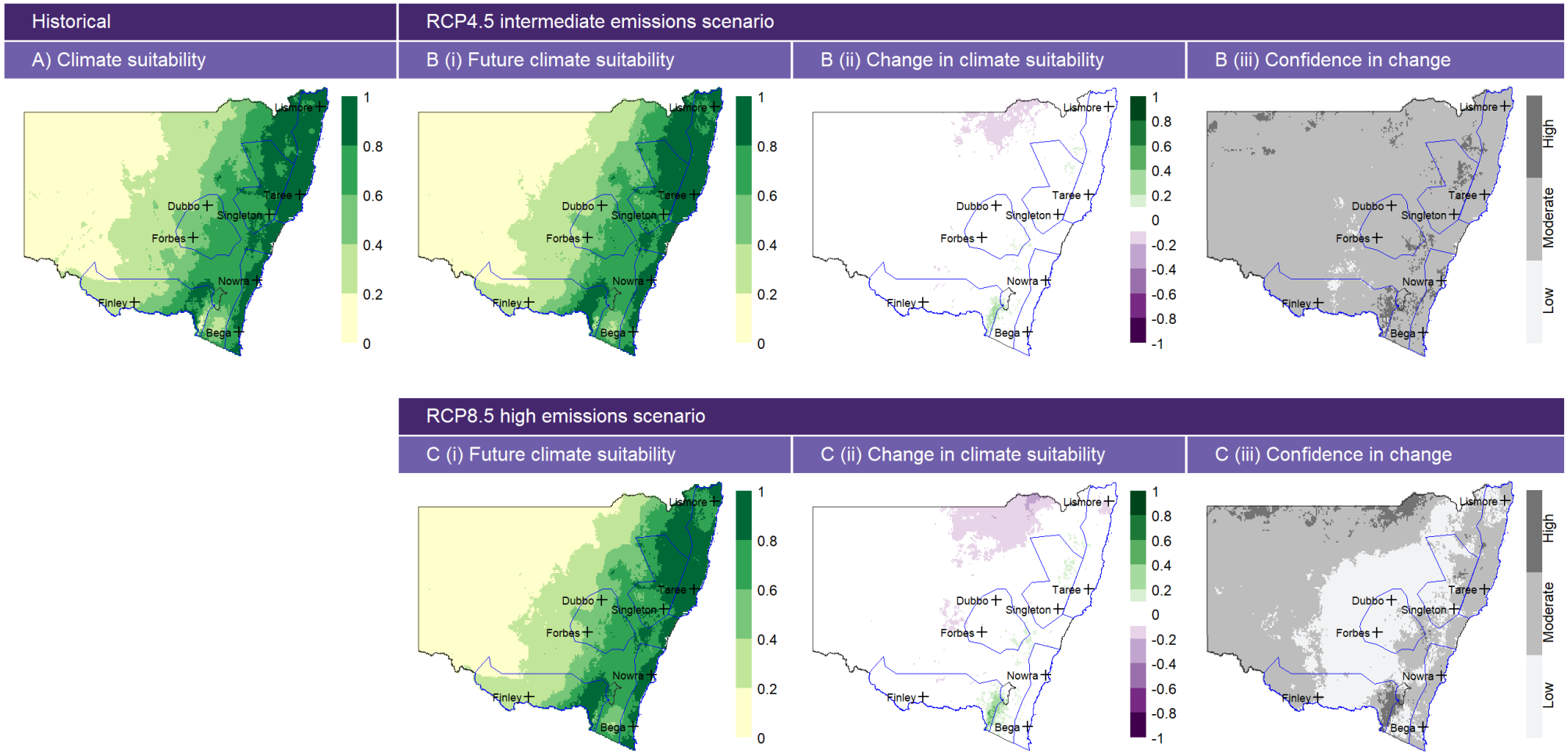
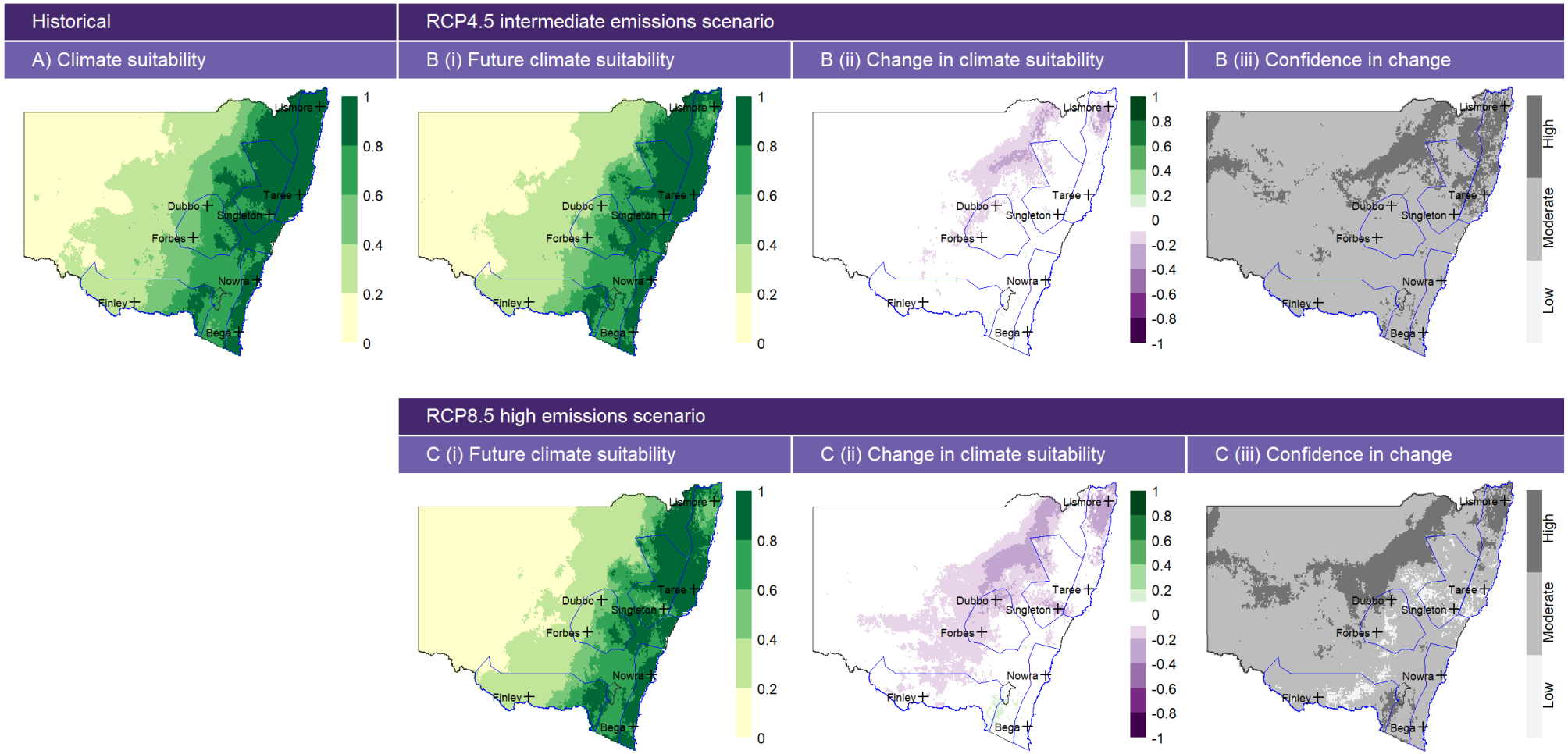


Figure A78: December climate suitability for chicory.

The panel is comprised of 7 maps: A) shows the historic climate suitability; B) and C) shows future climate suitability for the intermediate and high emissions scenarios, respectively; i) shows future climate suitability, ii) shows the projected future change in climate suitability as negligible (white), positive (green) or negative (purple) change, and iii) shows the level of model confidence associated with this change (low, moderate or high). Dairy production regions are marked by blue polygons and key towns in these regions are marked by black crosses.



Storm and Flood Industry Recovery Package

Climate Vulnerability Assessment

Dairy Pastures Results Report Appendix

NSW GOVERNMENT