

Algal-dominated to urchin-barren state



Ecological processes



Climate-driven changes



Over-exploitation of natural resources



Management interventions



Final configuration event

Alg+, Urc-, Lob+, Aba+, Oct-, Fis-, Mgt- (algal-dominated)

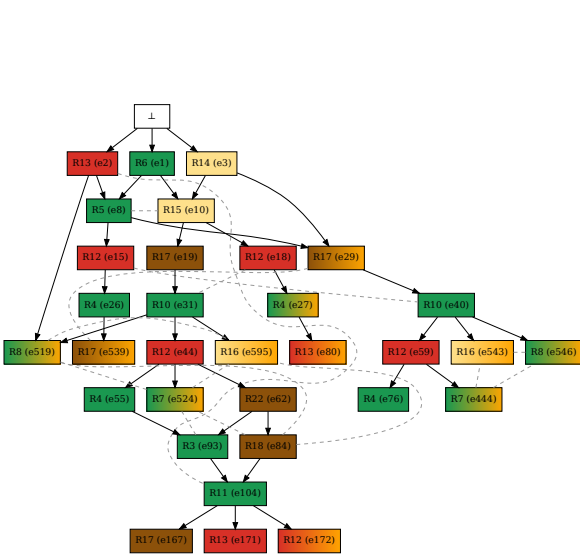
to

Alg-, Urc+, Lob-, Aba-, Oct+, Fis+, Mgt+ (urchin-barren)

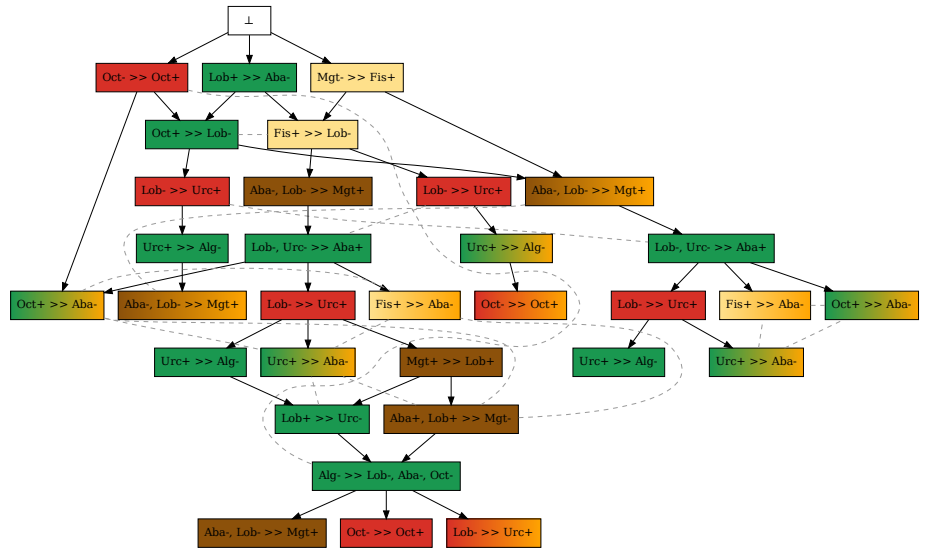
[illegible]

Figure 1: First set of configurations (6) leading to Urchin barren state from Algal dominated state.

R13 (e2), R5 (e4), R12 (e9), R1 (e12), R4 (e21), R6 (e22), R14 (e24), R3 (e34), R15 (e88), R17 (e296), R12 (e298)
R13 (e2), R5 (e4), R12 (e9), R1 (e12), R4 (e21), R14 (e24), R3 (e34), R16 (e36), R15 (e67), R17 (e291), R12 (e410)
R13 (e2), R5 (e4), R12 (e9), R1 (e12), R4 (e21), R6 (e22), R14 (e24), R3 (e34), R5 (e65), R17 (e303), R12 (e421)
R13 (e2), R5 (e4), R12 (e9), R1 (e12), R4 (e21), R14 (e24), R3 (e34), R16 (e36), R5 (e48), R17 (e300), R12 (e501)
R13 (e2), R5 (e4), R8 (e5), R12 (e9), R1 (e12), R4 (e21), R14 (e24), R3 (e34), R15 (e67), R17 (e294), R12 (e410)
R13 (e2), R5 (e4), R8 (e5), R12 (e9), R1 (e12), R4 (e21), R14 (e24), R3 (e34), R5 (e48), R17 (e302), R12 (e501)



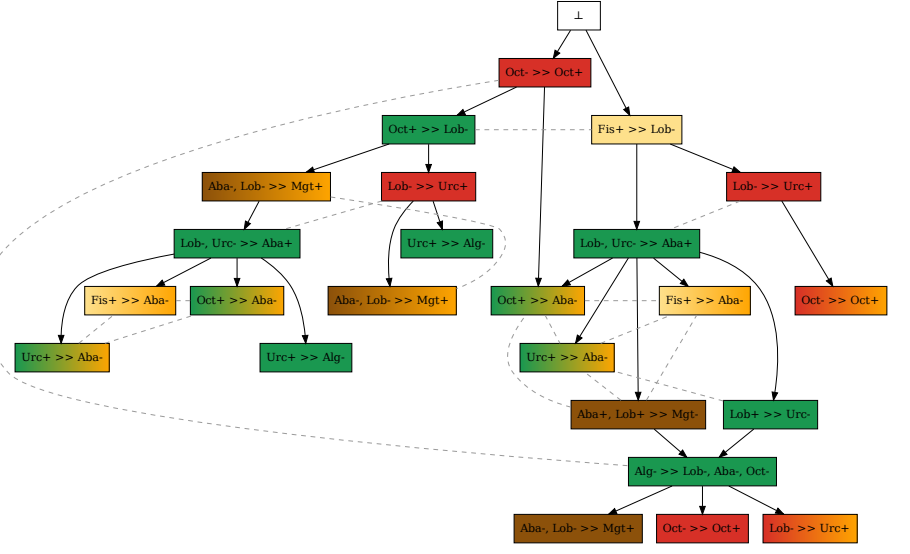
(a) Event structure with ids.



(b) Event structure with labels.



(c) Pathway structure with ids.



(d) Pathway structure with labels.

Figure 3: Third set of configurations (11) leading to Urchin barren state from Algal dominated state.

R6 (e1), R13 (e2), R14 (e3), R5 (e8), R12 (e15), R4 (e26), R17 (e29)

R6 (e1), R13 (e2), R14 (e3), R5 (e8), R17 (e29), R10 (e40), R12 (e59), R4 (e76), R7 (e444)

R6 (e1), R13 (e2), R14 (e3), R5 (e8), R17 (e29), R10 (e40), R12 (e59), R4 (e76), R16 (e543)

R6 (e1), R13 (e2), R14 (e3), R5 (e8), R17 (e29), R10 (e40), R12 (e59), R4 (e76), R8 (e546)

R6 (e1), R13 (e2), R14 (e3), R5 (e8), R12 (e15), R4 (e26), R17 (e539)

R6 (e1), R13 (e2), R14 (e3), R15 (e10), R17 (e19), R10 (e31), R12 (e44), R4 (e55), R7 (e524)

R6 (e1), R13 (e2), R14 (e3), R15 (e10), R17 (e19), R10 (e31), R12 (e44), R4 (e55), R16 (e595)

R6 (e1), R13 (e2), R14 (e3), R15 (e10), R17 (e19), R10 (e31), R12 (e44), R4 (e55), R8 (e519)

R6 (e1), R13 (e2), R14 (e3), R15 (e10), R12 (e18), R17 (e19), R4 (e27)

R6 (e1), R14 (e3), R15 (e10), R12 (e18), R17 (e19), R4 (e27), R13 (e80)

R6 (e1), R14 (e3), R15 (e10), R17 (e19), R10 (e31), R12 (e44), R4 (e55), R22 (e62), R18 (e84), R3 (e93), R11 (e104), R17 (e167), R13 (e171), R12 (e172)