

## Supplementary Materials

**Table S1:** Fitting parameters of linearly and randomly initialized maps

Map	Plant A		Plant B	
	mqe	tge	mqe	tge
1	0.4332	0	0.3851	0.0267
2	0.4434	0.0833	0.4087	0.0800
3	0.4336	0.0208	0.4076	0.0933
4	0.4406	0.0208	0.3768	0
5	0.4412	0.0208	0.3818	0.0933
6	0.4215	0.0208	0.3980	0.2000
7	0.4381	0.0208	0.3852	0.0800
8	0.4360	0	0.4117	0.0267
9	0.4401	0.0208	0.3728	0
10	0.4228	0.0208	0.3788	0.0933
11	0.4354	0.0208	0.4033	0.1067

**Table S2.** Pearson correlation results for  $\Delta$  SUVA with others parameter of DOM

$\Delta$ SUVA		Plant O		Plant T	
		RW-SW	SW-PW	RW-SW	SW-PW
$\Delta$ DOC	Pearson Corr.	-0.1256	<b>-0.5668</b>	-0.2944	0.0138
	p-value	0.6431	0.0221	0.1531	0.9479
$\Delta$ UV260	Pearson Corr.	<b>0.8502</b>	<b>0.7318</b>	0.3552	<b>0.8778</b>
	p-value	0.0000	0.0013	0.0814	0.0000
$\Delta$ Peak A	Pearson Corr.	0.2213	<b>0.7769</b>	-0.1929	-0.0270
	p-value	0.4101	0.0004	0.3556	0.8981
$\Delta$ Peak C	Pearson Corr.	0.1841	<b>0.7160</b>	-0.1135	-0.0640
	p-value	0.4949	0.0018	0.5892	0.7610
$\Delta$ Peak B	Pearson Corr.	0.1376	<b>0.6258</b>	0.1679	0.0192
	p-value	0.6114	0.0095	0.4224	0.9275
$\Delta$ Peak T	Pearson Corr.	0.2010	<b>0.7929</b>	0.0521	-0.0246
	p-value	0.4554	0.0002	0.8047	0.9069
$\Delta \beta/\alpha$	Pearson Corr.	-0.0948	0.3077	0.0418	0.1280
	p-value	0.7269	0.2463	0.8428	0.5422
$\Delta$ BIX	Pearson Corr.	-0.0850	0.0990	0.0407	0.0720
	p-value	0.7542	0.7152	0.8467	0.7323
$\Delta$ FI	Pearson Corr.	-0.1825	<b>-0.5254</b>	0.2683	0.0652
	p-value	0.4988	0.0366	0.1947	0.7570