

Supplement Tables and Figures for  
**Yoshiaki Tsuzuki, Possibility of Carson's trophic state index (TSI) application for brakish lakes in Japan, LAGUNA 13, p.89-98, 2006.**

These Tables and Figures are presented here with the permission of National Institute for Environmental Science, Japan.

Supplement Table 1 Regression coefficients of each parameter in eutrophic layer of surveyed six brackish lakes in Japan. (Aizaki et al., 1981a)

	Secchi <sup>a</sup>	SS	Chl.-a <sup>b</sup>	COD	T-P	T-N	POC	PON
SS	0.162							
Chl.-a <sup>b</sup>	<b>0.800</b>	0.623						
COD	0.043	<b>0.947</b>	0.498					
T-P	0.085	0.608	0.129	0.611				
T-N	0.587	0.757	<b>0.938</b>	0.593	0.189			
POC	0.799	0.446	<b>0.920</b>	0.228	0.057	<b>0.876</b>		
PON	0.831	0.495	<b>0.966</b>	0.314	0.012	<b>0.900</b>	<b>0.988</b>	
Total bac. <sup>c</sup>	0.625	<b>0.962</b>	<b>0.975</b>	<b>0.958</b>	0.574	<b>0.875</b>	<b>0.865</b>	<b>0.958</b>

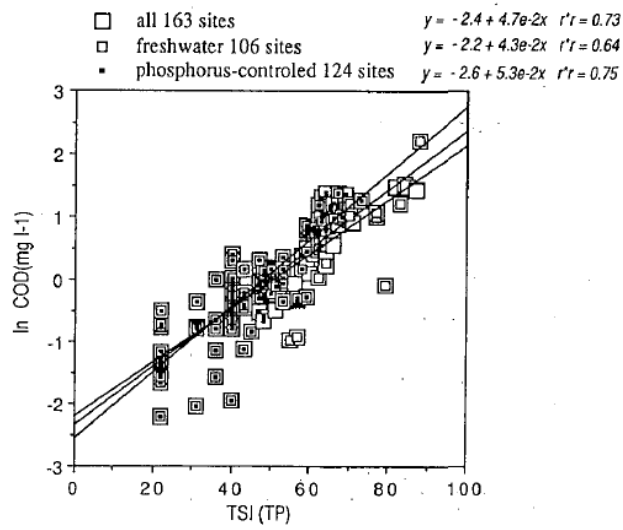
a: Chlorophyll-a; b: Secchi disk transparency; c: Total bacteria;  
The values 0.800 and above are indicated by bold.

Supplement Table 2 Environmental quality standards of COD for each zoning, TSI, and maximum permissive phosphorus concentration (Amano et al., 1991)

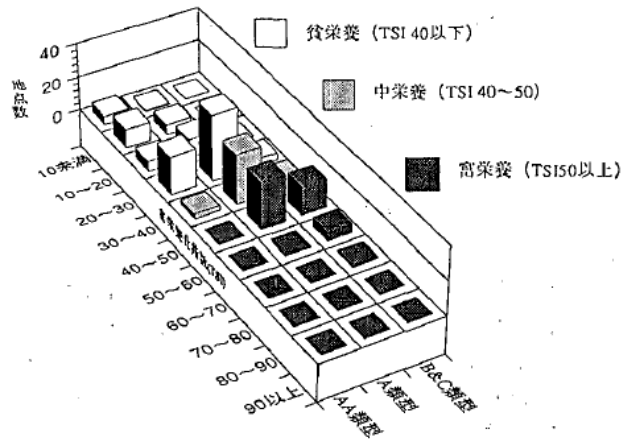
	Environmental quality standards zoning			
	AA	A	B	C
COD (mg l <sup>-1</sup> )	1	3	5	8
TSI <sup>a</sup>	41	57	65	72
TP (mg l <sup>-1</sup> ) <sup>b</sup>	0.011	0.038	0.073	0.127

a: calculated from COD environmental quality standards;

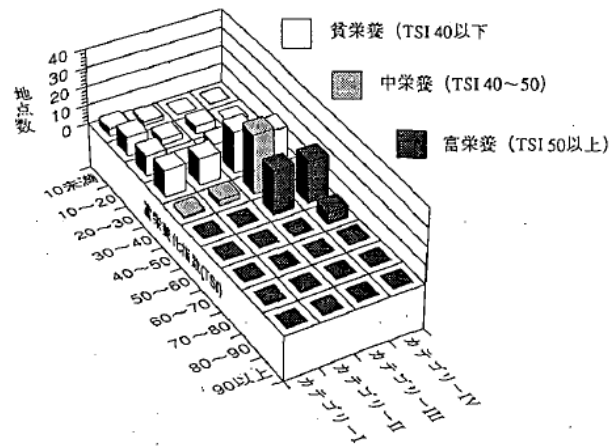
b: calculated from TSI.



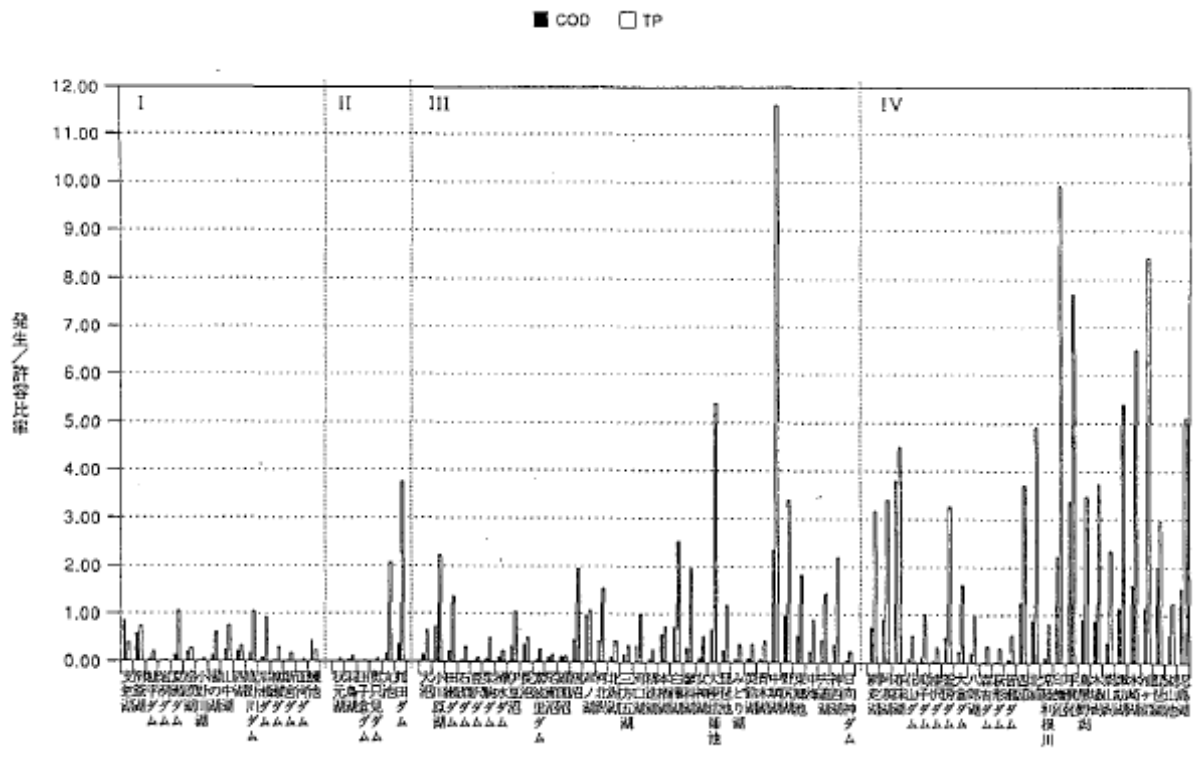
Supplement Fig. 2 Modified TSI calculated from TP and internal production COD (Amano et al., 1991)



Supplement Fig. 3 Frequency distribution of TSI calculated from chlorophyll-a, TSI (Chl), based on the environmental standard zoning, AA, A and "B and C". (Amano et al., 1991)



Supplement Fig. 4 Frequency distribution of TSI calculated from chlorophyll-a, TSI (Chl), based on the four categories of easiness to accomplish environmental quality standards (Amano et al., 1991)



Supplement Fig. 4 The ratio of the actual pollutant loads in 1982 and maximum permissible pollutant loads of TP and COD for 83 lakes in Japan (Amano et al., 1991)

## References

- Aizaki, M., Otsuki, A., Fukushima, T., Kawai, T., Hosomi M. and Muraoka, K. (1981a) Application of modified Carson's Trophic State Index to Japanese lakes and its relationships to other parameters related to trophic state., Res. Rep. Natl. Inst. Environ. Stud., No.23, 13-31. (in Japanese)
- Amano, K., Fukushima, T., Aizaki, M. and Naito, M. (1991) COD criteria, their achievements and water quality characteristics in lakes in Japan., *in* M. Aizaki ed. Proceedings of 4th Symposium on Aquatic Carrying Capacity and its Application, 3-39, Jan. 8th, 1992, 81p. (in Japanese)