Table 3. Monthly Fish Consumption Limits for the three population groups

Site	Fish species	PCB (µg/kg)	Number of fish meals (meal/month)					
			Carcinogenic effects			Noncarcinogenic effects		
			Gen	Children (1 - 4 yrs)	Children (5 -11 yrs)	Gen	Children (1 - 4 yrs)	Children (5 -11 yrs)
1	*Astyanax* sp	25.21	1.86	0.38	0.70	3.73	0.76	1.40
2	*Astyanax* sp	57.82	0.81	0.17	0.31	1.62	0.33	0.61
	R. quelen	342.00	0.14	0.03	0.05	0.27	0.06	0.10
	H. malabaricus	76.43	0.61	0.13	0.23	1.23	0.25	0.46
3	*Astyanax* sp	72.92	0.64	0.13	0.24	1.29	0.27	0.49
	R. quelen	275.45	0.17	0.03	0.06	0.34	0.07	0.13
	H. malabaricus	65.00	0.72	0.15	0.27	1.44	0.30	0.54
4	*R. quelen*	8.16	5.75	1.18	2.17	11.50	2.36	4.34
	H. malabaricus	1.68	27.89	5.75	10.54	55.91	11.49	21.05
5 (2015)	*R. quelen*	12.99	3.61	0.74	1.36	7.23	1.49	2.73
	H. malabaricus	3.39	13.84	2.85	5.22	27.69	5.70	10.44
5 (2016)	*R. quelen*	25.09	1.87	0.38	0.71	3.74	0.77	1.41
	H. malabaricus	9.94	4.72	0.97	1.78	9.44	1.94	3.56

Note: "Gen" refers to general adult population

Table 3 shows the monthly number of meals that can be consumed by the three population groups without risk to the health. Since most of the numbers of meals that may be safely eaten is so low, we concluded that there is a potential risk in consuming all species analyzed. The risk assessment results gave support to the decision makers of Health and Environment Secretariat for an integrated management of this area. Further studies are necessary for a better understanding of the contamination level and evolution in this region.

Acknowledgements
We gratefully acknowledge the support and infrastructure provided by CETESB and all the people who worked on this study.

References
1. CETESB. Desenvolvimento de índices biológicos para monitoramento em reservatórios do Estado de São Paulo, 2010. Available on-line: < http://www.cetesb.sp.gov.br/Agua/rios/publicacoes.asp >
2. Almeida F V, Centeno A J, Bisinoti M C, Jardim W F (2007); *Quim. Nova.* 30(8): 1976-85
3. Brasil. Ministério do Interior. Portaria Nº 19 de 29.01.81. D.O.U., 03.09.85 – pag. 12941, 1985.
4. Schwarzenbach R P, Gschwend P M, Imboden D M. (1995) *Environ Org Chem.* 2nd ed. Wiley-Interscience: USA.
5. WHO. Air quality guidelines 2nd ed. Denmark, 2000.
6. USEPA – SW846. Method 3550C – Ultrasonic Extraction. 2007. Available on-line: < http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/3_series.htm >
7. Smedes, F (1999). Analyst. 124, 1711-1718.
8. USEPA. Guidance for Assessing Chemical Contaminant Data for Use In Fish Advisories. Volume 2: Risk Assessment and Fish Consumption Limits. 3rd ed. 2000. Available on-line: < http://www.epa.gov/waterscience/fish/advice/volume2/index.html >
9. Health Canada. Human Health Risk Assessment of Mercury in Fish and Health Benefits of Fish Consumption, 2007. Available on-line: < http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/nutrition/merc_fish_poisson-eng.pdf >
10. USEPA. Integrated Risk Information System. Polychlorinated biphenyls (PCBs) (CASRN 1336-36-3), 1997. Available on-line: < https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=294>
11. USEPA. Integrated Risk Information System. Aroclor 1254 (CASRN 11097-69-1), 1996b Available on-line: < https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=389 >
12. Voorspoels S, Covaci A, Neels H. (2008). *Environ Toxicol Pharmacol.* 25(2):179-82.