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CONTAMINATION OF AN OTTER FOUND DEAD IN THE F.R.G

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As a "by-product" of the assessment of pollution risk for the remaining otter populations in Lower Saxony (see previous article) muscle, kidney and liver tissue of a female otter (about one year old) was received and analysed for PCB, DDT and metabolites (Σ -DDT), HCH-isomers, HCB and octachlorostyrene (OCS) (all muscle tissue), mercury (liver tissue), cadmium, and lead (liver and kidney tissue). The animal was killed in a road accident (July 1986) very near to the river Elbe (within 10 km) about halfway between the "disappearance" of the Elbe into the GDR and the town of Hamburg. This site is not reckoned to be part of the otter's present main distribution range.

Results:

	Liver		Kidney	
Cd	0.025 fr. wt.	0.09 dry wt.	0.080 fr. wt.	0.31 dry wt.
Pb	0.10 "	0.36 "	0.34 "	1.3 "
Hg	7.9 "	28.1 "		
	Muscle Tissue (extr. fat)			
	PCB		34	
	HCB		10.5	
	OCS		4.3	
	Σ -DDT		1.3	
	γ -HCH		0.06	

Exceptionally high were the Hg-, HCH-, and OCS-contaminations. This does not fit well into the results of the baseline Study (see [article above](#)) but absolutely reflects the pollution pattern of the river Elbe. Many studies showed that this river is badly polluted esp. with Hg and HCB (and with OCS) by industrial effluents. Thus the finding strongly suggests that the otter fed from fish out of the river Elbe. No otter population could possibly survive in a habitat as contaminated as this river is. Furthermore it indicates that there is an exchange happening between East and West German otter populations via the River Elbe.

The "moderate" PCB-contamination is not at all contrary to the interpretation of the risk assessment, because an enormous variability was found in all studies analysing otter tissues for PCB (see SANDEGREN et al, 1980; MASON et al., 1986; BROEKHUIZEN, 1987). One animal cannot be taken as being representative.

By using an analytical method developed by HEIDMANN (1986), it clearly could be shown that - due to metabolisation - the composition of PCB isomers is drifting towards the high chlorinated and biologically more stable ones in the predator.

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