Supplementary materials to the paper "Transfer of radiocaesium from contaminated bottom sediments to marine organisms through benthic food chain"
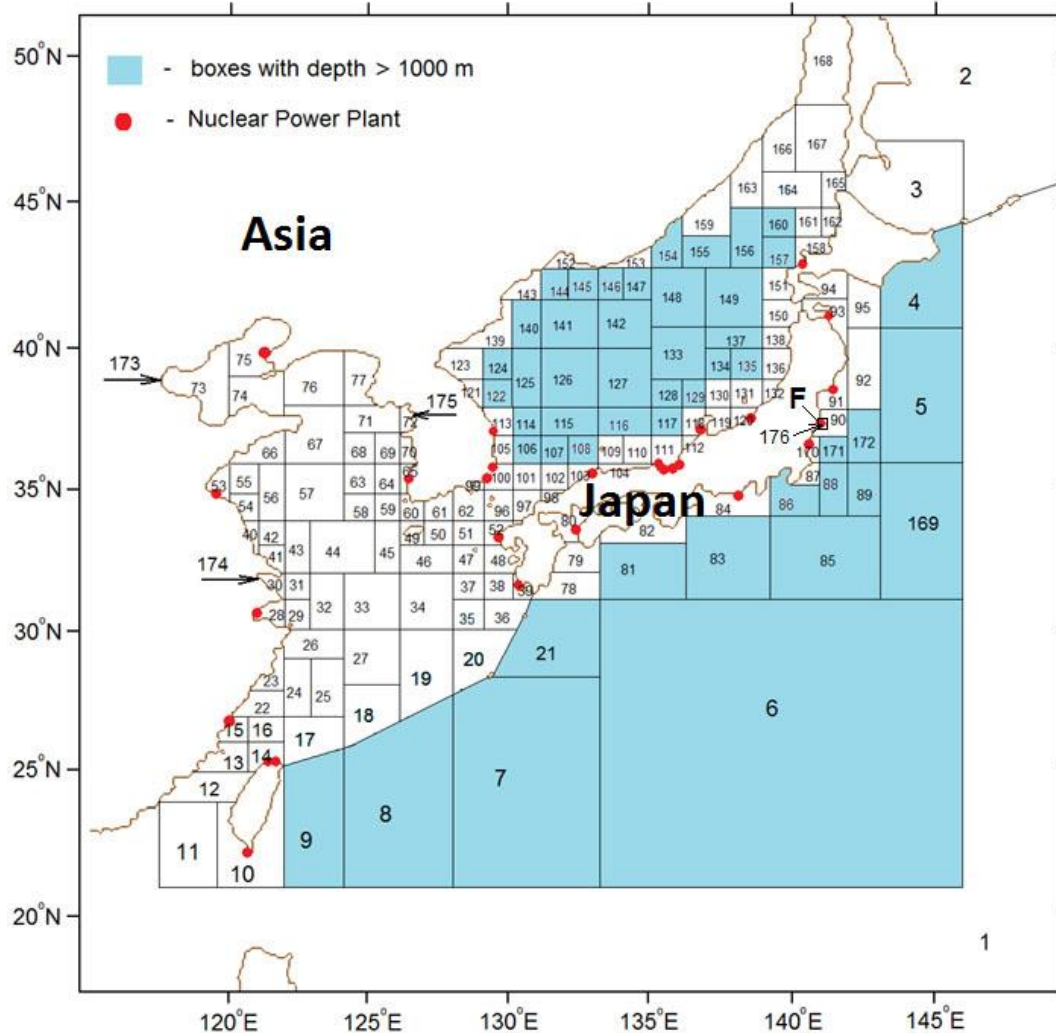
Fig. S1. The compartment system for the Northwestern Pacific. The shaded boxes represent the deep water boxes. The boxes with shaded lines present the areas with deposition from the Fukushima Dai-ichi accident. The arrows with numbers show the compartments representing estuaries of large rivers (174 – the Yangtze River, 173 – the Huanghe River and 175 – the Han River. The NPPs are shown by filled circles. Letter "F" represent the Fukushima Dai-ichi NPP.
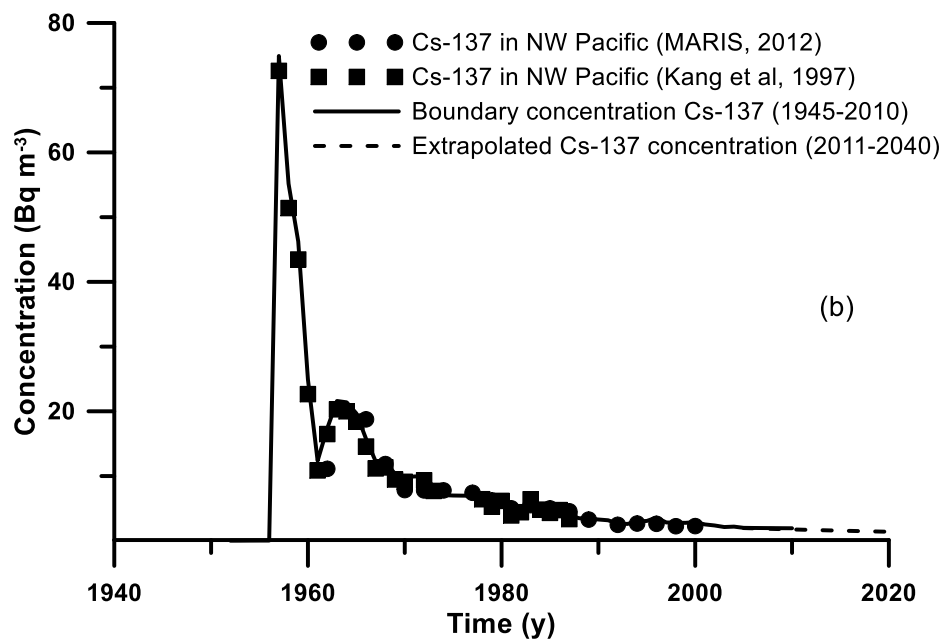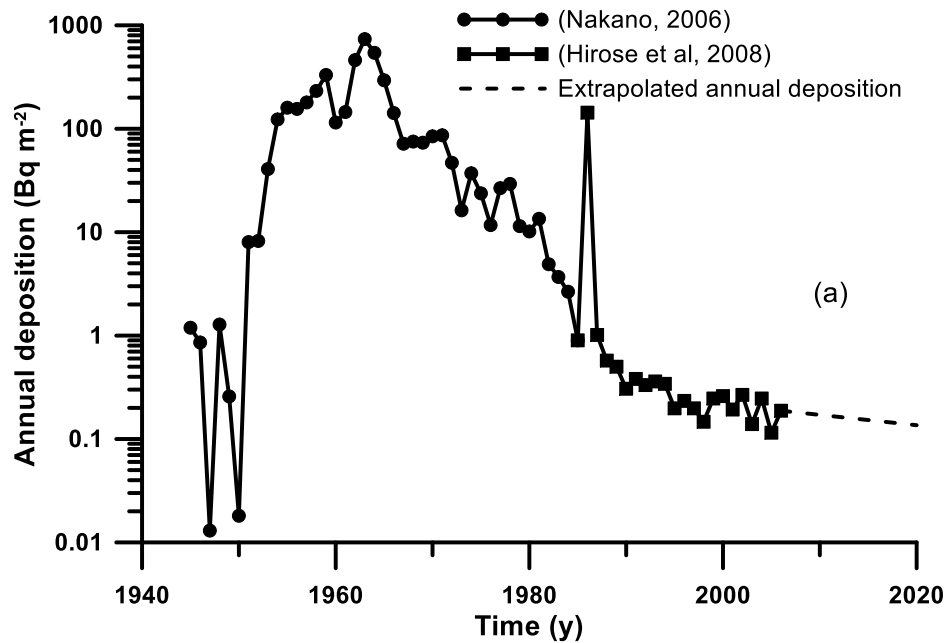
Fig. S2. Time variations of the annual deposition on the surface compiled from Nakano (2006) and Hirose et al (2008) (a) and the boundary values for the ^{137}Cs concentration in the NW Pacific compiled from MARIS (2012) database and Kang et al. (1997) (b).
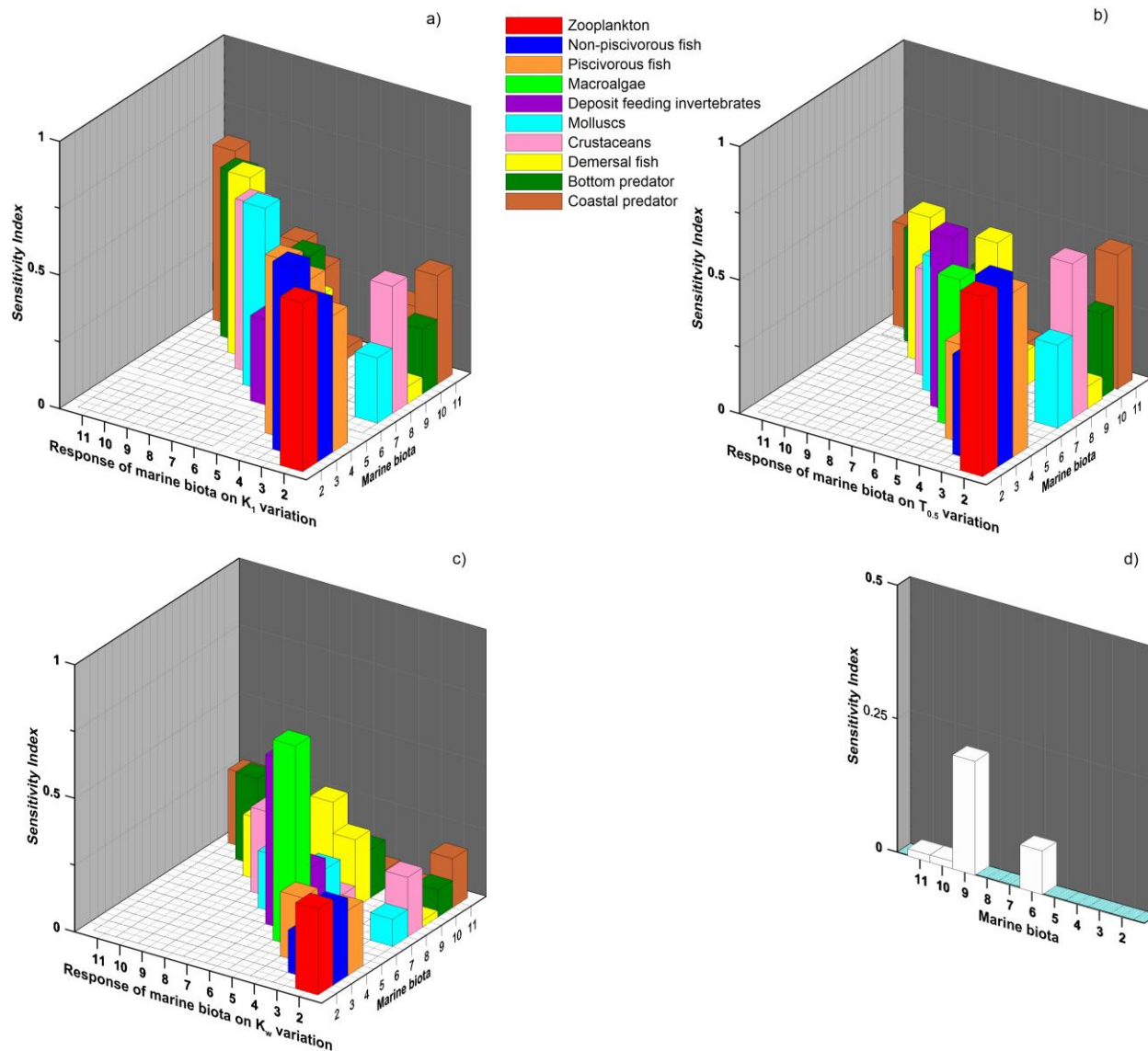
Fig. S3. Sensitivity indexes calculated for food uptake rate K_1 (a), biological half-life $T_{0.5}$ of ^{137}Cs in the organism (b), water uptake rate K_w (c) and for ratio of concentration of assimilated radioactivity from organic fraction of bottom sediment to the concentration of radioactivity of bulk bottom sediment ϕ_{org}.
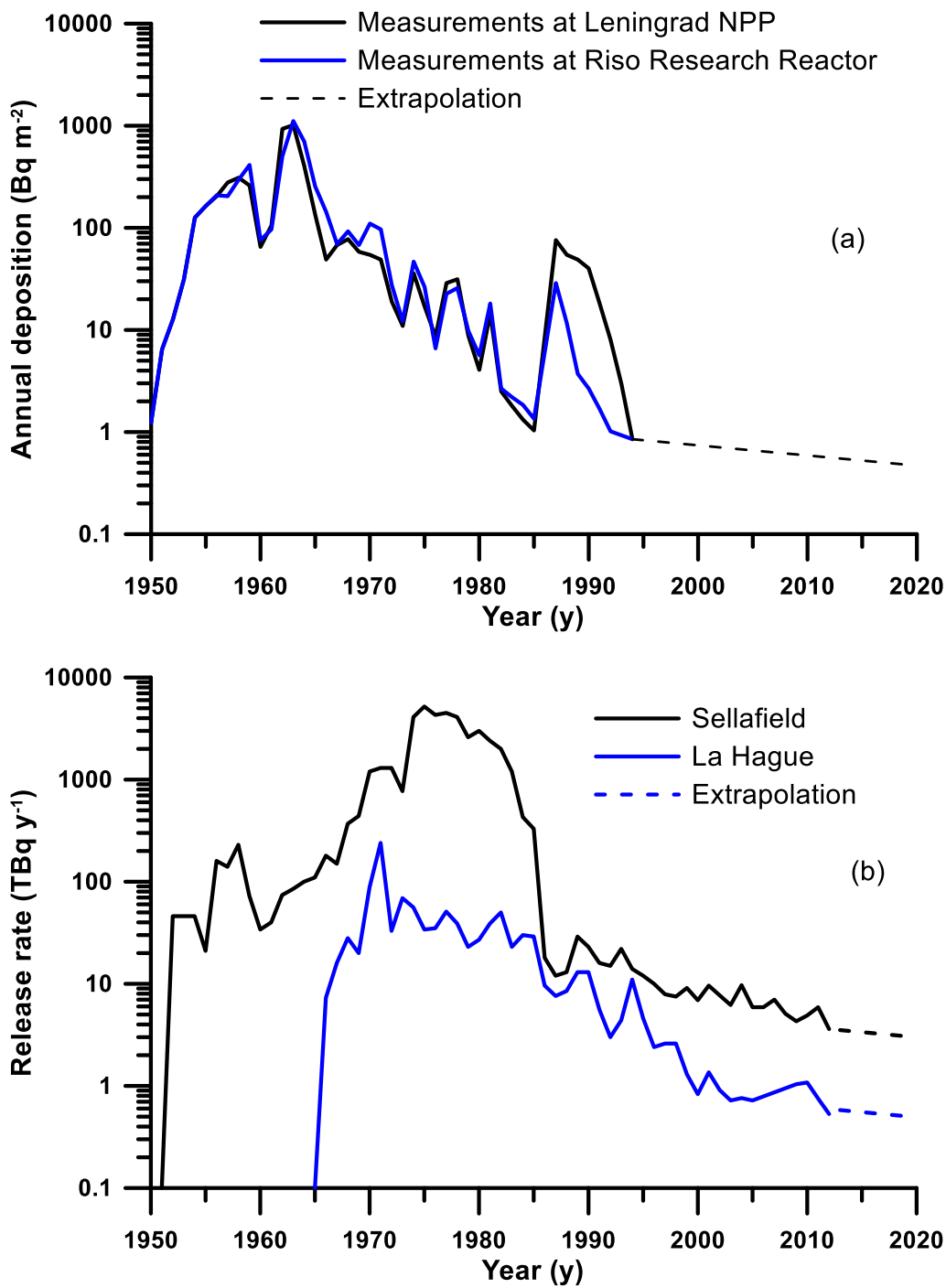
Fig. S4. Global atmosphere deposition rate of ^{137}Cs on the Baltic Sea (HELCOM, 1995) (a) and release of ^{137}Cs from Sellafield and La Hague reprocessing plants (HELCOM, 2009).

Table S1. Atmosphere deposition density of ^{137}Cs in 1986 due to the Chernobyl accident (HELCOM, 1995)

Basin	Deposition density, Bq m^{-2}	Inventory, PBq	Boxes
North-Atlantic	1000	35.4	3-34
Kattegat	1700	0.04	35-40
Belt Sea	1800	0.05	41-43
Baltic Proper	4500	0.82	44-57, 59-61
Gulf of Riga	5000	0.08	58
Gulf of Finland	15000	0.83	62-67
Aland Sea	72500	0.55	68-69, 71-72
Archipelago Sea	17300	0.04	70
Bothnian Sea	35000	1.94	73-79
Bothnian Bay	6900	0.31	80-81