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SUPPLEMENTARY MATERIAL TO

Application of alkane biological markers in the assessment of the origin of oil pollutants in the soil and recent river sediments (River Vrbas, Bosnia and Herzegovina)

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SAMPLES

The studied samples of fresh river sediments and bank sediments (soils) belong to the Vrbas River. The samples were taken near the sewerage drainage in the central zone of the city of Banja Luka. The watershed of the Vrbas River and the locations of the sampling sites of the four samples of fresh river sediment (RS_1–RS_4) and the four samples of coastal sediments, *i.e.*, soils (S_1–S_4) are shown in Fig. S-1. The fresh river sediments were taken at the boundary of water and the bank, while the soils were taken at a few meters distance from the River. All samples were taken at a depth of 10 cm.

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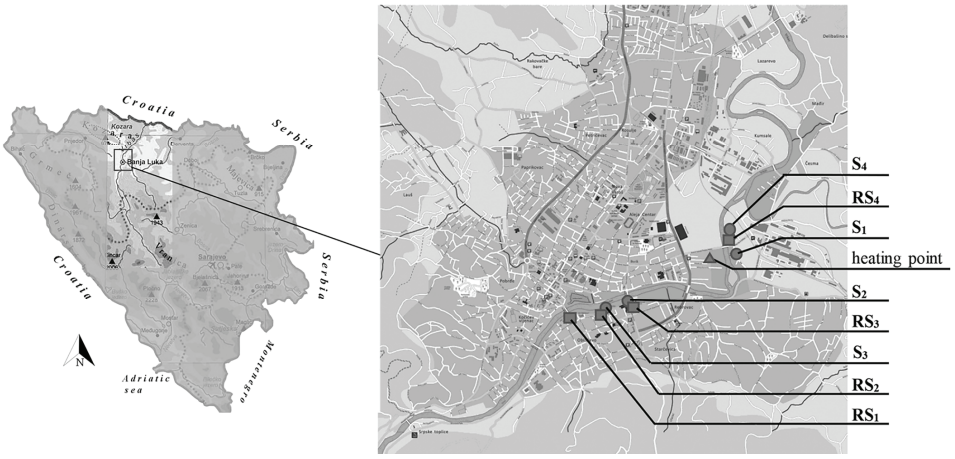

Fig. S-1. Flow of the Vrbas River with the sampling locations of the river sediments, RS_1–RS_4, and the riverbank sediments (soils), S_1–S_4.

TABLE S-I. Identification of representative sterane and terpane peaks in fragmentograms *m*/*z* 217 and *m*/*z* 191 shown in Fig. S-1b and c

Peak	Compounds
1	C_{27} 13β(H)17α(H)20(*S*)-diasterane
2	C_{28} 13*α*(H)17*β*(H)20(*R*)-diasterane + C_{27} 14*β*(H)17*β*(H)20(*S*)-sterane
3	C_{27} 14*α*(H)17*α*(H)20(*R*)-sterane
4	C_{28} 14*β*(H)17*β*(H)20(*S*)-sterane
5	C_{28} 14*α*(H)17*α*(H)20(*R*)-sterane
6	C_{29} 14*β*(H)17*β*(H)20(*S*)-sterane
7	C_{29} 14*α*(H)17*α*(H)20(*R*)-sterane
8	C_{29} 17*α*(H)21*β*(H)-hopane
9	C_{30} 17*α*(H)21*β*(H)-hopane
10	C_{31} 17*α*(H)21*β*(H)-hopane (22*S* and 22*R*)
11	C_{32} 17*α*(H)21*β*(H)-hopane (22*S* and 22*R*)
12	C_{33} 17*α*(H)21*β*(H)-hopane (22*S* and 22*R*)
13	C_{34} 17*α*(H)21*β*(H)-hopane (22*S* and 22*R*)
14	C_{35} 17*α*(H)21*β*(H)-hopane (22*S* and 22*R*)

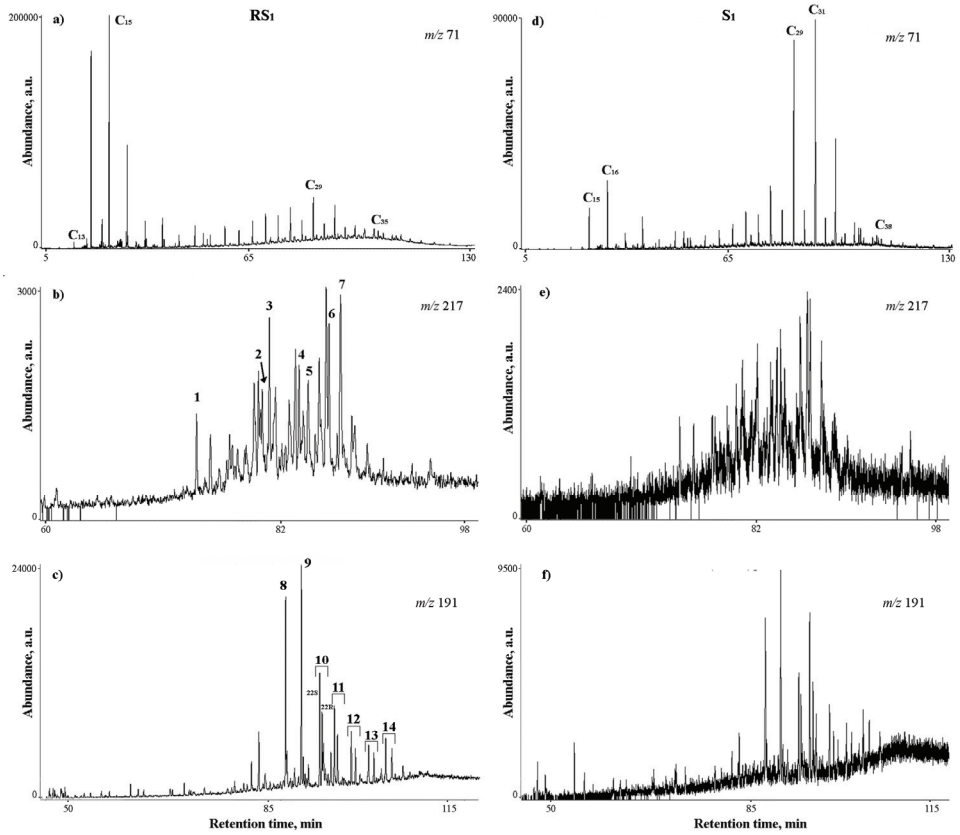

Fig. S-2. Fragmentograms of *n*-alkanes (*m*/*z* 71), steranes (*m*/*z* 217) and terpanes (*m*/*z* 191) of the RS_1 and S_1 samples, which are typical for the extracts of the investigated fresh river sediments and soils.

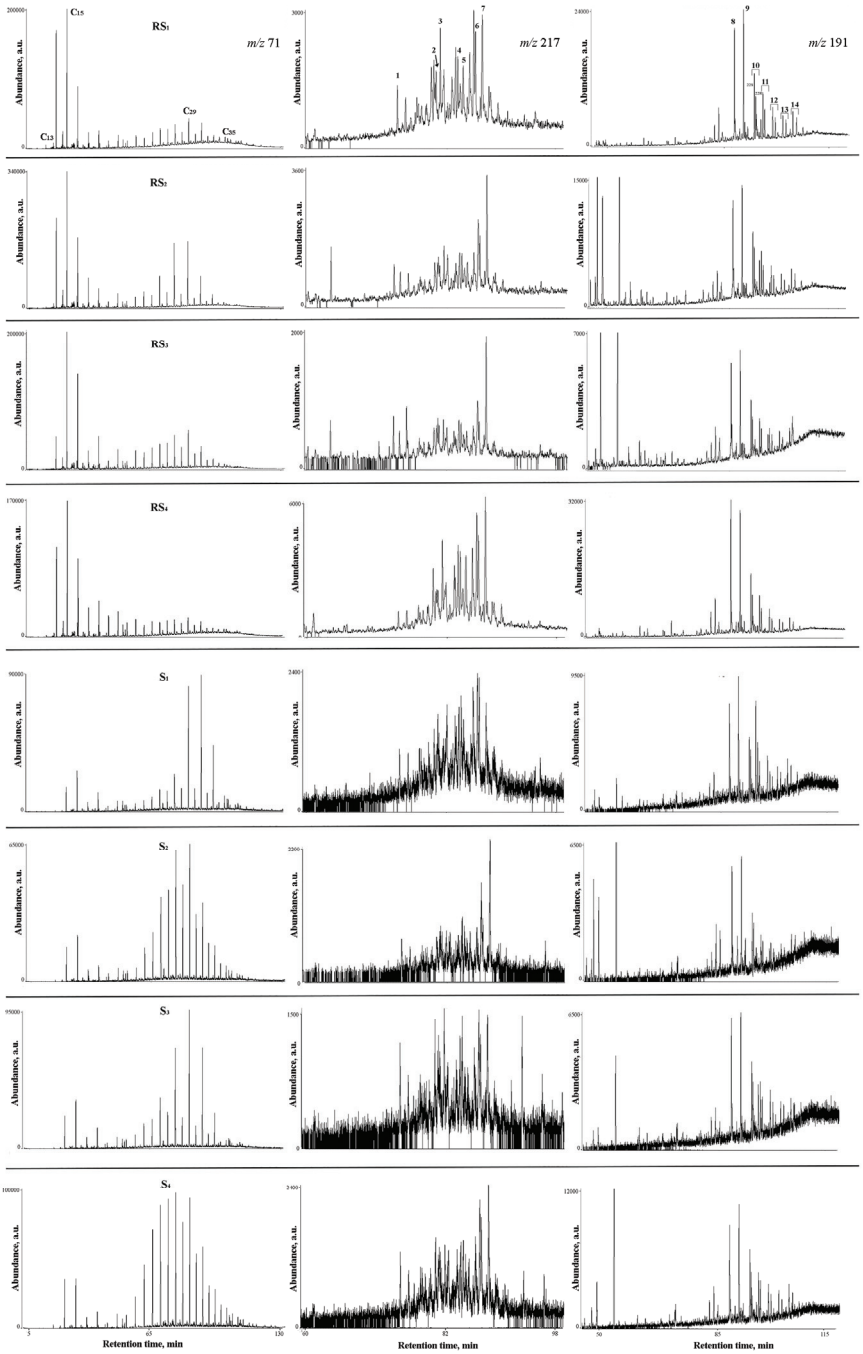

Fig. S-3. Fragmentograms of *n*-alkanes (*m*/*z* 71), steranes (*m*/*z* 217) and terpanes (*m*/*z* 191) of the river sediments samples, RS_1-RS_4 and bank sediments (soils) samples, S_1–S_4.