

Figure S1. The construction of a highway next to the study area (left) has increased the already pre-existing tendency of the water erosion to move sediments along the slope, therefore in 2019 a containment structure was built to slow down the ongoing process in the more pressing gully; however, sedimentation processes continue to occur alongside the highway on many other linear erosion forms (right).



Figure S2. Location of the sampling points in each rooting for the measure-ment of soil characteristics.

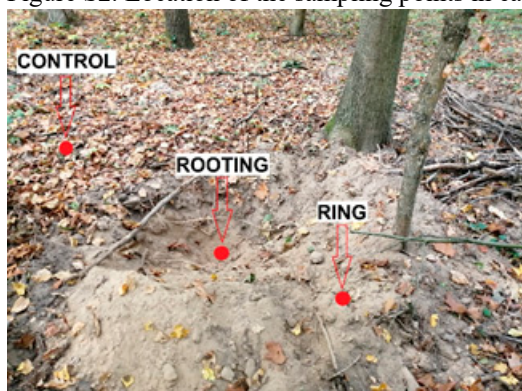


Table S1: Description of soil profiles in 6 deep rootings in the study area.

Sample	Location	Soil horizon	Depth (cm)	Color	Texture
1	Rooting	A	0–37	Grayish brown	Sandy loam
		AB	37–69	Mixed	Sandy loam
		B	69–100	Redish	Loamy sand
	Ring	A	0–58	Grayish brown	Loam
		AB	58–100	Brownish red	Sandy loam
		A	0–16	Grayish-brown	Sandy loam
	Control	AB	16–48	Mixed	Sandy loam
		B	48–100	Redish	Sandy loam
2	Rooting	A	0–26	Grayish brown	Sandy loam
		AB	26–68	Mixed	Sandy loam
		B	68–91	Redish	Loamy sand
		C	91–100	White	Sand (fine)
	Ring	A	0–39	Gray-brown	Sandy loam
		AB	39–71	Mixed	Sandy loam
		B	71–100	Redish	Sandy loam
	Control	A	0–36	Dark brown	Sandy loam
		B	36–86	Red	Sandy loam
		C	86–100	White	Sand
3	Rooting	A	0–28	Grayish brown	Sandy loam
		B	28–79	Whiteish red	Sandy loam

	Ring	C	79–100	White	Sand (fine)
		A <sub>1</sub>	0–25	Grayish brown	Loamy sand
		A <sub>2</sub>	25–62	Light brown	Loamy sand
		B	62–100	Light red	Sandy loam
	Control	A	0–34	Grayish brown	Loamy sand
		AC	34–47	Whiteish brown	Loamy sand
		BC	47–82	Whiteish red	Sandy loam
		B	82–100	Red	Sandy clay
4	Rooting	A	0–25	Grayish brown	Sandy loam
		AB	25–41	Redish brown	Sandy loam
		B	41–75	Red	Sandy clay
		C <sub>1</sub>	75–86	White	Sand
		C <sub>2</sub>	86–100	Grayish white	Sand (fine)
	Ring	A	0–22	Grayish brown	Sandy loam
		AB	22–44	Redish brown	Sandy loam
		BC	44–62	Whiteish red	Sandy clay
		C	62–100	White	Clay
	Control	A	0–36	Grayish brown	Sandy loam
		AB	36–75	Redish brown	Sandy loam
		B	75–100	Red	Sandy clay

Table S2: Description of soil profiles in 6 deep rootings in the study area.

Sample	Location	Soil horizon	Depth (cm)	Color	Texture
5	Rooting	A	0–13	Dark brown	Sandy loam
		AB	13–31	Redish brown	Sandy loam
		B	31–58	Red	Sandy clay
		BC	58–78	Whiteish red	Loamy sand
		C	78–100	White	Sand
	Ring	A	0–39	Brown	Sandy loam
		AB	39–66	Redish brown	Sandy loam
		B	66–89	Red	Sandy clay
		BC	89–100	Whiteish red	Loamy sand
	Control	A	0–32	Grayish brown	Sandy loam
		AB	32–47	Redish brown	Loamy clay
		BC	47–66	Whiteish red	Sandy clay
		B	66–100	Red	Clay
6	Rooting	AC	0–28	Whiteish brown	Loamy sand
		A	28–55	Brown	Sandy loam

		AB	55–84	Redish brown	Sandy loam
		B	84–100	Red	Sandy loam
	Ring	AC	0–71	Whiteish brown	Loamy sand
		A	71–100	Brown	Sandy loam
	Control	A <sub>1</sub>	0–18	Light brown	Sandy loam
		C	18–61	White	Sand (fine)
		A <sub>2</sub>	61–72	Brown	Sandy loam
		B	72–100	Red	Sandy loam