Appendix

Table 6: Water-holding capacity in %. Oil: soil with 5% crude oil (Boscán). No oil: soil without oil. [Soil: 97% loamy sand + 3% dry leaves].

	Replicate No.	Humid soil [g]	Dry soil [g]	Water-holding capacity [%] per replicate	Mean	SD
Oil	1	562.34	442.58	27.06	27.55	0.70
	2	571.83	446.59	28.04		
No oil	1	478.65	358.90	33.37	32.54	1.17
	2	493.60	374.75	31.71		

Table 7: Dates of transplantation, fertilizer application and sampling (all 2002) and days since transplantation.

	Trans-plantation	Fertilizer application 1	2	3	4	Sampling 1	2	3
Date	09.05.	20.05.	04.06.	15.07.	04.09.	03.–08.07.	27.08.–04.09.	22.10.-01.11.
Days	0	11	26	67	109	55–60	110-118	166-176

Table 8: Nitrogen (N), phosphorus (P), potassium (K) per application and fertilizer level in mg / kg air-dried soil.

Application	Fertilizer level	mg N/kg	mg P/kg	mg K/kg
1	**Low**	30	15	15
	Medium	90	45	45
	High	180	90	90
2	**Low**	30	15	15
	Medium	45	23	23
	High	0	0	0
3	**Low**	30	15	15
	Medium	45	23	23
	High	60	30	30
4	**Low**	30	15	15
	Medium	40	20	20
	High	60	30	30
Total	**Low**	120	60	60
	Medium	220	110	110
	High	300	150	150

Table 9: Mortality rate, vitality and reproducing capability of the transplants (*Vetiveria zizanioides* (L.) Nash) per treatment, all in % of the total transplant numbers of the respective treatment. Mortality and vitality rates determined at 6 times between the 19th and 55th day of growing. Rate of reproducing transplants determined at the end of the observation period. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (total number of transplants: 24); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (total number of transplants: 24); Treatment E: uncontaminated soil + low fertilizer level (F1) (total number of transplants: 18). Treatments C and D not analyzed (no plants).

Date	Mortality rate of transplants [%]			Rate of transplants with a good vitality [%]			Reproducing transplants [%]		
	Treatment A	Treatment B	Treatment E	Treatment A	Treatment B	Treatment E	Treatment A	Treatment B	Treatment E
27.05.02	8	33	0	79	33	100			
04.06.02	8	38	0	79	38	100			
13.06.02	17	38	0	75	38	100			
18.06.02	25	38	0	75	42	100			
25.06.02	25	38	0	75	38	100			
02.07.02	25	42	0	75	42	100	92	79	100

Table 10: Number of dead tillers (*Vetiveria zizanioides* (L.) Nash) per time and treatment. Total numbers of dead tillers per treatment and mortality rate of tillers per treatment in %. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (total number of tillers without transplants: 272); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (total number of tillers without transplants: 297); Treatment E: uncontaminated soil + low fertilizer level (F1) (total number of tillers without transplants: 185). Treatments C and D not analyzed (no plants).

Time [months]	Number of dead tillers		
	Treatment A	Treatment B	Treatment E
0	0	0	0
2	0	0	0
4	1	1	5
6	3	5	2
Total	4	6	7
Mortality rate [%]	2	2	4

Table 11: Shoot biomass of *Vetiveria zizanioides* (L.) Nash per time and treatment in grams of dry weight. Values are shoot biomass per plant, per pot and means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time. Treatments C and D not analyzed (no plants). Data $[*^{ABE}]$ → significant different ($p < 0.05$) to treatments A, B, E. [n.e. = not examined].

Time [months]	Treatment	Unit No.	Transplant No.	Shoot biomass [g dry wt/plant] Plant	[g dry wt/pot] Pot	[g dry wt/pot] Mean	SD
0			1	1.27		2.67	0.10
			2	1.50			
			3	1.28			
			4	1.35			
			5	1.28			
2	A	A1	1	2.15	5.15	5.58 [*E]	1.25
			2	3.00			
		A4	1	2.74	6.35		
			2	3.61			
		A5	1	2.59	6.80		
			2	4.22			
		A11	1	2.24	4.03		
			2	1.79			
	B	B4	1	1.20	2.77	2.96 [*E]	0.46
			2	1.57			
		B5	1	1.60	3.48		
			2	1.88			
		B7	1	0.71	2.62		
			2	1.91			
		B8	1	n.e.	n.e.		
			2	n.e.			
	E	E1	1	5.09	9.53	10.16 [*AB]	2.74
			2	4.43			
		E8	1	5.26	13.16		
			2	7.91			
		E9	1	3.91	7.79		
			2	3.87			
4	A	A2	1	4.22	19.65	16.87 [*E]	5.21
			2	15.43			
		A9	1	17.13	17.13		
			2	0.00			
		A10	1	5.39	21.22		
			2	15.83			
		A12	1	1.01	9.48		
			2	8.46			
	B	B3	1	5.47	14.03	13.70 [*E]	3.68
			2	8.56			
		B10	1	1.28	8.61		
			2	7.33			
		B11	1	14.79	14.79		
			2	0.00			
		B12	1	15.23	17.37		
			2	2.14			
	E	E2	1	16.51	45.95	39.15 [*AB]	9.90
			2	29.44			
		E3	1	20.80	43.72		
			2	22.92			
		E6	1	15.16	27.79		
			2	12.63			
6	A	A3	1	6.52	44.20	46.74 [*E]	2.00
			2	37.68			
		A6	1	23.09	49.08		
			2	25.99			
		A7	1	20.57	47.03		
			2	26.45			
		A8	1	25.57	46.65		
			2	21.08			
	B	B1	1	26.38	52.95	47.22 [*E]	4.07
			2	26.58			
		B2	1	23.07	45.24		
			2	22.17			
		B6	1	7.96	43.64		
			2	35.68			
		B9	1	26.42	47.05		
			2	20.63			
	E	E4	1	40.25	76.73	80.78 [*AB]	4.57
			2	36.48			
		E7	1	47.24	85.74		
			2	38.49			
		E5	1	33.37	79.89		
			2	46.51			

Table 12: Root biomass of *Vetiveria zizanioides* (L.) Nash per time and treatment in grams of dry weight. Values are root biomass per plant, per pot and means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time. Treatments C and D not analyzed (no plants). Data $^{[*ABE]}$ → significant different ($p < 0.05$) to treatments A, B, E. [n.e. = not examined].

Time [months]	Treatment	Unit No.	Transplant No.	Root biomass [g dry wt/plant] Plant	[g dry wt/pot] Pot	[g dry wt/pot] Mean	SD
0			1	0.69		1.59	0.41
			2	0.52			
			3	1.06			
			4	0.86			
			5	0.86			
2	A	A1	1		5.08	5.09	1.57
			2				
		A4	1		6.65		
			2				
		A5	1		5.70		
			2				
		A11	1		2.94		
			2				
	B	B4	1		2.52	2.71 [*E]	0.16
			2				
		B5	1		2.81		
			2				
		B7	1		2.80		
			2				
		B8	1		n.e.		
			2				
	E	E1	1		11.25	7.93 [*B]	4.70
			2				
		E8	1		n.e.		
			2				
		E9	1		4.61		
			2				
4	A	A2	1		18.08	13.97 [*E]	4.72
			2				
		A9	1		15.41		
			2				
		A10	1		15.24		
			2				
		A12	1		7.16		
			2				
	B	B3	1		10.65	10.11 [*E]	2.93
			2				
		B10	1		5.94		
			2				
		B11	1		11.01		
			2				
		B12	1		12.82		
			2				
	E	E2	1		28.50	30.96 [*AB]	3.49
			2				
		E3	1		33.43		
			2				
		E6	1		n.e.		
			2				
6	A	A3	1		n.e.	46.56 [*E]	0.13
			2				
		A6	1		46.46		
			2				
		A7	1		46.65		
			2				
		A8	1		n.e.		
			2				
	B	B1	1		56.58	50.61 [*E]	8.44
			2				
		B2	1		44.64		
			2				
		B6	1		n.e.		
			2				
		B9	1		n.e.		
			2				
	E	E4	1		n.e.	94.25 [*AB]	5.16
			2				
		E5	1		90.60		
			2				
		E7	1		97.90		
			2				

Table 13: Total biomass of *Vetiveria zizanioides* (L.) Nash per time and treatment in grams of dry weight. Values are total biomass per plant, per pot and means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time. Treatments C and D not analyzed (no plants). Data $[*^{ABE}]$ → significant different ($p < 0.05$) to treatments A, B, E. [n.e. = not examined].

Time [months]	Treatment	Unit No.	Transplant No.	Total biomass [g dry wt/pot] Pot	Mean	SD
0			1 2 3 4 5		4.27	0.30
2	A	A1	1 2	10.23	10.68 [*BE]	2.75
		A4	1 2	13.00		
		A5	1 2	12.50		
		A11	1 2	6.97		
	B	B4	1 2	5.29	5.67 [*AE]	0.54
		B5	1 2	6.29		
		B7	1 2	5.42		
		B8	1 2	n.e.		
	E	E1	1 2	20.78	16.59 [*AB]	5.93
		E8	1 2	n.e.		
		E9	1 2	12.39		
4	A	A2	1 2	37.73	30.84 [*E]	9.73
		A9	1 2	32.54		
		A10	1 2	36.46		
		A12	1 2	16.64		
	B	B3	1 2	24.68	23.81 [*E]	6.61
		B10	1 2	14.55		
		B11	1 2	25.80		
		B12	1 2	30.19		
	E	E2	1 2	n.e.	66.72 [*AB]	14.75
		E3	1 2	77.15		
		E6	1 2	56.29		
6	A	A3	1 2	n.e.	94.61 [*E]	1.32
		A6	1 2	95.54		
		A7	1 2	93.68		
		A8	1 2	n.e.		
	B	B1	1 2	109.53	99.71 [*E]	13.89
		B2	1 2	89.88		
		B6	1 2	n.e.		
		B9	1 2	n.e.		
	E	E4	1 2	n.e.	177.06 [*AB]	9.30
		E5	1 2	170.49		
		E7	1 2	183.64		

Table 14: Shoot-root-ratio (shoot biomass / root biomass, both means in grams of dry weight per time and treatment) of *Vetiveria zizanioides* (L.) Nash. Ratio of biomass (total, shoot, root) of treatments A and B to control biomass (treatment E: uncontaminated soil) in %. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data $[*^{ABE}] \rightarrow$ significant different ($p < 0.05$) to treatments A, B, E.

Time [months]	Treatment	Shoot-root ratio	Ratio to control biomass [%]		
			Total	Shoot	Root
0	**A**	1.68	100	100	100
	B	1.68	100	100	100
	E	1.68			
2	**A**	1.10	59	55	64
	B	1.09	31	29	34
	E	1.28			
4	**A**	1.21	44	43	45
	B	1.36	34	35	33
	E	1.26			
6	**A**	1.00	53	58	49
	B	0.93	56	58	54
	E	0.86			

Table 15: Number of tillers (inclusive transplants) of *Vetiveria zizanioides* (L.) Nash per time and treatment. Values are numbers per plant and pot, means ± standard deviation (SD) per pot and numbers per treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data [*ABE] → significant different ($p < 0.05$) to treatments A, B, E.

Time [months]	Treatment	Unit No.	Transplant No.	Number of tillers per plant	per pot	Mean per pot	SD per pot	per treatment
0	A			1	2	2	0	8
	B			1	2	2	0	8
	E			1	2	2	0	6
2	A	A1	1	2	5	7 [*B]	2	29
			2	3				
		A4	1	4	9			
			2	5				
		A5	1	5	8			
			2	3				
		A11	1	3	7			
			2	4				
	B	B4	1	1	1	3 [*AE]	2	10
			2	n.e.				
		B5	1	1	4			
			2	3				
		B7	1	1	5			
			2	4				
		B8	1	n.e.	n.e			
			2	n.e.				
	E	E1	1	4	7	8 [*B]	1	24
			2	3				
		E8	1	3	8			
			2	5				
		E9	1	4	9			
			2	5				
4	A	A2	1	6	22	19	5	75
			2	16				
		A9	1	0	17			
			2	17				
		A10	1	7	24			
			2	17				
		A12	1	0	12			
			2	12				
	B	B3	1	6	21	17	4	68
			2	15				
		B10	1	0	12			
			2	12				
		B11	1	0	17			
			2	17				
		B12	1	1	18			
			2	17				
	E	E2	1	8	24	20	5	59
			2	16				
		E3	1	6	15			
			2	9				
		E6	1	9	20			
			2	11				
6	A	A3	1	10	45	44 [*B]	3	174
			2	35				
		A6	1	18	40			
			2	22				
		A7	1	21	43			
			2	22				
		A8	1	20	46			
			2	26				
	B	B1	1	35	63	54 [*AE]	7	216
			2	28				
		B2	1	24	49			
			2	25				
		B6	1	12	49			
			2	37				
		B9	1	28	55			
			2	27				
	E	E4	1	22	40	38 [*B]	2	114
			2	18				
		E5	1	18	37			
			2	19				
		E7	1	19	37			
			2	18				

Table 16: Height of tillers (inclusive transplants) of *Vetiveria zizanioides* (L.) Nash at 2 months. Measured in cm. Values are heights of tillers, means ± standard deviation (SD) per pot and treatment and maximum heights per treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data $*^{ABE}$ → significant different ($p < 0.05$) to treatments A, B, E.

		Height [cm] (at 2 months)																			
		Treatment A								**Treatment B**								**Treatment E**					
Unit No.		**A1**		**A4**		**A5**		**A11**		**B4**		**B5**		**B7**		**B8**		**E1**		**E8**		**E9**	
Transplant No.		**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Tiller No. per plant	**1**	17.7	61.0	69.6	59.6	59.5	33.8	49.9	44.2	29.8	n.e.	13.1	28.1	13.1	34.0	n.e.	n.e.	81.7	100.1	104.0	95.9	105.0	67.0
	2		39.1	38.2	52.1	27.6	22.4	25.0	33.0				18.0		23.3			79.8	37.3	85.4	88.1	31.3	64.5
	3		27.7	17.1	32.9	27.4	1.9	19.0	27.6				7.8		7.7			72.5	10.0	40.9	61.8	29.0	62.6
	4		8.3	9.4	31.5	17.9			3.7						1.3			16.1			39.6	11.4	44.0
	5				6.1	17.6															15.6		2.3
Mean	**per**	30.8		35.2		26.0		28.9		29.8		16.8		15.9		n.e.		56.8		66.4		46.3	
SD	**pot**	20.4		22.2		16.6		15.5		0.0		8.6		12.9		n.e.		35.3		31.8		31.9	
Mean		**30.4 [*E]**								**17.6 [*E]**								**56.1 [*AB]**					
SD	**per treatment**	**18.3**								**10.9**								**32.6**					
Maximum		**69.6**								**34.0**								**105.0**					

Table 17: Height of tillers (inclusive transplants) of *Vetiveria zizanioides* (L.) Nash at 4 months. Measured in cm. Values are heights of tillers, means ± standard deviation (SD) per pot and treatment and maximum heights per treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data $[*^{ABE}]$ → significant different ($p < 0.05$) to treatments A, B, E.

		Height [cm] (at 4 months)																					
		Treatment A								**Treatment B**								**Treatment E**					
Unit No.		**A2**		**A9**		**A10**		**A12**		**B3**		**B10**		**B11**		**B12**		**E2**		**E3**		**E6**	
Transplant No.		**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Tiller No. Per plant	**1**	55.3	66.6	n.e.	79.9	53.0	68.8	n.e.	61.4	45.4	54.1	n.e.	60.7	n.e.	65.8	40.5	71.1	104.8	113.5	120.1	113.0	109.5	84.7
	2	39.3	63.0		61.8	47.0	64.3		51.3	45.0	50.7		46.8		61.9		64.0	96.2	98.8	115.3	105.6	81.1	70.2
	3	39.0	57.6		60.0	41.3	63.2		49.2	33.8	45.7		46.6		61.5		62.8	72.4	85.3	87.9	70.5	70.1	65.7
	4	34.5	56.7		53.4	37.8	62.5		45.0	28.6	43.3		39.7		57.5		61.1	64.5	74.9	65.2	68.7	66.1	65.5
	5	24.1	54.0		52.2	31.1	53.1		36.4	18.5	41.5		37.1		45.9		59.6	52.5	64.6	42.3	66.1	56.9	64.4
	6	1.5	50.5		51.5	23.4	53.1		35.7	17.9	41.4		32.8		45.5		56.1	37.9	46.3	30.8	44.7	35.2	46.3
	7		45.7		48.8	2.5	51.2		33.9		36.4		29.8		44.3		52.7	13.3	40.7		35.0	23.2	45.2
	8		44.0		44.1		49.5		28.5		36.1		18.5		42.2		51.0	8.2	38.7		7.6	5.5	21.7
	9		38.4		43.5		46.8		22.7		31.4		17.0		42.1		49.7		38.6		5.9	3.4	20.0
	10		38.2		38.0		45.4		22.3		30.8		10.3		41.6		48.4		38.5				19.7
	11		33.2		37.9		45.4		20.2		28.2		8.8		26.6		42.4		29.7				1.4
	12		24.8		33.8		41.8		8.0		22.7		3.0		26.0		32.3		12.1				
	13		23.0		26.9		35.9				15.5				24.5		28.0		7.3				
	14		7.4		25.8		33.0				15.4				17.8		20.4		5.3				
	15		6.6		25.8		31.2				13.5				16.0		19.2		3.2				
	16		2.5		19.2		30.6								9.7		13.3		1.4				
	17				2.2		5.9								5.0		4.4						
Mean	**per pot**	36.6		41.5		42.4		34.6		33.1		29.3		37.3		43.2		47.9		65.2		47.8	
SD		19.6		18.5		16.6		15.3		12.4		17.9		18.9		19.4		35.0		37.7		30.4	
Mean		**39.2 [*E]**								**36.1 [*E]**								**52.3 [*AB]**					
SD	**per treatment**	**17.7**								**17.4**								**34.5**					
Maximum		**79.9**								**71.1**								**120.1**					

Table 18: Height of tillers (inclusive transplants) of *Vetiveria zizanioides* (L.) Nash at 6 months. Measured in cm. Values are heights of tillers, means ± standard deviation (SD) per pot and treatment and maximum heights per treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data $*^{ABE}$ → significant different ($p < 0.05$) to treatments A, B, E.

		Height [cm] (at 6 months)																					
		Treatment A								**Treatment B**								**Treatment E**					
Unit No.		**A3**		**A6**		**A7**		**A8**		**B1**		**B2**		**B6**		**B9**		**E4**		**E5**		**E7**	
Transplant No.		**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
	1	65.8	80.0	77.0	70.3	72.0	76.1	75.5	68.5	62.1	65.5	73.1	70.8	51.9	69.6	76.3	71.6	117.5	107.8	99.0	100.5	106.8	113.7
	2	51.1	79.7	63.2	68.5	68.1	73.2	74.7	64.7	53.6	61.3	71.2	70.3	48.7	69.3	69.0	68.0	98.5	104.9	93.9	98.5	101.3	96.2
	3	50.6	79.6	62.6	61.2	57.3	70.4	68.5	62.7	52.4	59.4	65.9	64.3	48.5	68.5	65.9	67.2	92.0	98.6	92.1	89.5	92.8	94.5
	4	44.3	79.3	56.3	60.2	55.5	69.9	62.6	59.4	51.0	58.4	61.6	63.8	45.0	67.5	61.7	55.8	84.5	81.8	87.4	89.0	91.3	93.3
	5	39.8	72.1	55.9	55.8	52.0	69.6	60.0	57.8	50.7	55.1	56.2	61.5	31.3	65.7	58.7	51.7	81.0	80.5	85.1	87.7	82.3	92.4
	6	8.8	71.0	50.0	53.7	48.0	65.9	59.2	56.0	49.8	54.7	52.2	49.7	30.8	63.3	58.7	51.3	80.3	80.1	79.5	83.2	77.1	92.1
	7	8.6	67.4	47.7	53.0	46.4	65.9	59.1	49.2	47.9	54.2	52.0	49.0	30.7	61.2	57.3	51.0	76.4	75.6	78.0	81.6	71.8	77.1
	8	4.7	66.1	45.4	51.4	43.4	58.8	58.4	49.2	45.8	53.5	49.7	48.0	27.9	60.4	55.7	47.7	75.7	57.8	77.6	80.6	69.9	71.7
	9	1.3	64.4	44.0	50.7	41.4	56.4	48.4	48.7	42.2	50.0	49.5	46.8	20.6	55.8	52.4	46.0	75.4	57.7	57.0	78.8	69.4	69.2
	10	1.0	61.5	42.6	48.8	40.4	56.0	47.2	47.0	40.8	49.2	49.0	46.5	16.3	54.9	48.7	45.8	70.2	39.5	39.6	78.6	65.9	66.4
	11		60.5	40.2	45.6	38.0	53.6	47.0	46.8	40.3	48.4	45.1	45.1	7.8	54.1	46.6	43.6	59.7	35.8	29.8	73.3	65.4	53.7
	12		60.0	37.0	42.9	37.3	51.5	46.1	44.4	39.8	46.5	38.3	35.2	1.5	53.2	43.0	41.1	50.2	31.9	28.3	68.1	64.6	47.9
	13		57.0	35.3	42.2	37.2	50.4	37.4	43.5	39.6	43.5	36.2	32.0		50.5	42.0	36.9	44.8	25.0	17.1	58.1	55.7	18.4
	14		55.7	23.7	41.1	34.7	37.0	34.4	36.8	38.3	42.3	30.2	29.4		48.8	41.5	35.3	36.6	10.4	4.7	39.2	54.0	6.4
	15		53.8	10.5	40.2	13.4	32.6	26.0	36.6	37.6	41.7	21.9	27.7		46.6	40.7	29.5	29.0	5.3	3.1	28.9	37.8	4.8
	16		51.8	4.8	34.2	7.6	19.8	15.6	31.8	34.9	37.1	16.4	25.0		44.6	34.6	25.7	19.2	3.5	2.6	5.2	9.0	3.2
	17		50.3	2.9	27.5	3.7	8.0	14.5	31.3	33.8	36.5	11.2	22.3		44.3	30.0	18.8	16.0	2.8	1.5	3.6	8.5	3.1
Tiller No. Per plant	**18**		50.1	1.4	17.4	2.9	3.7	6.4	17.0	31.8	33.2	6.2	15.5		42.3	28.4	17.1	7.8	2.0	1.0	2.0	3.0	2.2
	19		48.6		6.9	2.8	3.1	2.3	16.2	31.3	27.1	5.0	4.1		40.2	17.2	15.0	4.5			1.1	1.5	
	20		40.2		2.9	2.7	2.7	1.0	6.0	30.2	20.2	2.7	3.3		39.1	15.0	10.9	2.7					
	21		40.0		2.0	2.7	2.5		2.9	28.7	16.7	2.5	2.3		39.0	13.4	3.0	2.5					
	22		34.8		1.5		2.4		2.5	28.0	6.6	2.3	1.6		36.6	5.8	2.1	2.0					
	23		31.0						2.4	26.5	4.3	1.8	1.4		35.0	5.3	2.0						
	24		20.2						2.3	20.7	2.2	1.1	1.0		34.0	4.3	1.8						
	25		15.1						1.1	14.0	1.3		0.8		33.9	2.5	1.5						
	26		7.2						0.8	6.8	1.3				33.2	2.4	1.4						
	27		7.0							6.7	1.2				30.6	1.9	0.8						
	28		2.8							5.8	1.0				23.7	1.4							
	29		2.7							2.0					21.1								
	30		2.6							2.0					19.2								
	31		1.6							1.8					14.5								
	32		1.1							1.5					12.6								
	33		1.1							1.5					1.9								
	34		0.8							1.3					1.8								
	35		0.8							1.2					1.2								
	36														1.2								
Mean	**per pot**	37.6		39.5		38.1		37.6		31.3		33.0		37.5		33.1		50.7		54.7		57.7	
SD		28.1		21.5		25.5		23.6		20.5		24.4		20.1		23.6		36.3		36.6		35.8	
Mean	**per treatment**	**38.2 [*BE]**								**33.6 [*AE]**								**54.3 [*AB]**					
SD		**24.7**								**22.1**								**36.0**					
Maximum		**80.0**								**76.3**								**117.5**					

Table 19: Number of tillers per time and treatment in % within height classes in cm. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants).

Time [months	Treatment	Total number per treatment	Number of tillers [%]			
			H < 30	30 <= H < 60	60 <= H < 90	H => 90
			cm			
0	**A**	8	100	0	0	0
	B	8	100	0	0	0
	E	6	100	0	0	0
2	**A**	29	55	38	7	0
	B	10	90	10	0	0
	E	24	25	21	37	17
4	**A**	75	27	60	13	0
	B	68	38	50	12	0
	E	59	29	25	31	15
6	**A**	174	33	46	21	0
	B	216	40	48	12	0
	E	114	33	16	33	18

Table 20: Clump diameter of plants (transplants + tillers) of *Vetiveria zizanioides* (L.) Nash per time and treatment. Values are clump diameters per plant and means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (4 pots per time); Treatment E: uncontaminated soil + low fertilizer level (F1) (3 pots per time). Treatments C and D not analyzed (no plants). Data $^{[*ABE]}$ → significant different ($p < 0.05$) to treatments A. B. E.

Time [months]	Treatment	Unit No.	Transplant No.	Clump diameter [g dry wt/plant] Plant	[g dry wt/pot] Mean	SD
0			1	1.0	0.9	0.1
			2	1.0		
			3	0.8		
			4	0.9		
			5	0.9		
2	A	A1	1	0.9	1.9 [*BE]	0.5
			2	2.3		
		A4	1	1.9		
			2	2.4		
		A5	1	2.5		
			2	1.8		
		A11	1	1.8		
			2	1.8		
	B	B4	1	1.8	1.4 [*AE]	0.3
			2	n.e.		
		B5	1	1.2		
			2	1.5		
		B7	1	1.1		
			2	1.3		
		B8	1	n.e.		
			2	n.e.		
	E	E1	1	2.8	2.4 [*AB]	0.4
			2	2.1		
		E8	1	3.0		
			2	2.2		
		E9	1	2.0		
			2	2.4		
4	A	A2	1	2.9	3.0 [*E]	0.5
			2	3.4		
		A9	1	n.e.		
			2	3.3		
		A10	1	2.2		
			2	3.5		
		A12	1	n.e.		
			2	2.9		
	B	B3	1	2.9	3.0 [*E]	0.9
			2	3.0		
		B10	1	n.e.		
			2	n.e.		
		B11	1	n.e.		
			2	4.2		
		B12	1	1.6		
			2	3.2		
	E	E2	1	3.1	4.1 [*AB]	0.7
			2	4.5		
		E3	1	3.5		
			2	4.0		
		E6	1	5.2		
			2	4.3		
6	A	A3	1	2.5	4.3	1.2
			2	6.5		
		A6	1	3.9		
			2	3.6		
		A7	1	4.2		
			2	4.8		
		A8	1	4.8		
			2	3.8		
	B	B1	1	6.0	4.5	0.9
			2	4.5		
		B2	1	4.9		
			2	4.0		
		B6	1	3.0		
			2	5.0		
		B9	1	4.3		
			2	4.2		
	E	E4	1	6.0	5.2	1.0
			2	3.8		
		E5	1	4.8		
			2	6.2		
		E7	1	5.0		
			2	n.e.		

Table 21: Roots of *Vetiveria zizanioides* (L.) Nash after 6 months, analyzed with Win/Mac Rhizo 2002c Régent Instruments Inc. Analyzed root samples: length in cm, average of diameter in mm, surface area in cm^2, biomass in grams of dry weight and ratio of biomass of analyzed sample to biomass of total root sample in %. Projection of analyzed root samples to total roots: total length in cm, total surface area in cm^2 and total biomass in grams of dry weight. A representative root sample of one exemplary pot (with 2 transplants) per treatment was analyzed. Treatment A: PHC-contaminated soil + medium fertilizer level (unit no.: A6, sample dry weight: 3.5 g); Treatment B: PHC-contaminated soil + high fertilizer level (unit no.: B2, sample dry weight: 3.1 g); Treatment E: uncontaminated soil + low fertilizer level (unit no.: E5, sample dry weight: 2.3 g). Treatments C and D not analyzed (no plants).

Treatment	Analyzed Root Sample					Total Root Sample		
	Length [cm]	Average of diameter [mm]	Surface area [cm^2]	Biomass [dry wt g]	Analyzed/ Total [%]	Total Length [cm]	Total surface area [cm^2]	Total Biomass [dry wt g]
A	5608.42	0.78	1388.25	3.36	7.23	77572	19196	46.46
B	4871.29	0.87	1343.41	3.21	7.21	67563	18640	44.54
E	9153.34	0.46	1238.36	2.29	2.53	361792	48993	90.60

Table 22: Root surface area (SA) of *Vetiveria zizanioides* (L.) Nash at 6 months in cm^2 and %, classified within diameter classes in mm of the respective root segments. Analysis with Win/Mac Rhizo 2002c Régent Instruments Inc. A representative root sample of one exemplary pot (with 2 transplants) per treatment was analyzed. Treatment A: PHC-contaminated soil + medium fertilizer level (unit no.: A6, sample dry weight: 3.5 g); Treatment B: PHC-contaminated soil + high fertilizer level (unit no.: B2, sample dry weight: 3.1 g); Treatment E: uncontaminated soil + low fertilizer level (unit no.: E5, sample dry weight: 2.3 g). Treatments C and D not analyzed (no plants).

Treatment		SA<0.25	0.25<=SA<0.50	0.50<=SA<0.75	0.75<=SA<1.00	1.00<=SA<1.25	1.25<=SA<1.50	1.50<=SA<1.75	1.75<=SA<2.00	SA=>2.00
		[mm]								
A	[cm^2]	20.11	191.61	252.96	208.21	133.69	116.63	110.48	114.97	239.60
	[%]	1	14	19	15	10	8	8	8	17
B	[cm^2]	9.97	128.51	220.49	247.42	191.95	140.54	79.51	68.64	256.39
	[%]	1	10	16	18	14	10	6	5	20
E	[cm^2]	148.08	364.58	214.75	169.84	128.76	103.03	43.39	24.63	41.28
	[%]	12	30	17	14	10	8	4	2	3

Table 23: Soil reaction (pH) as a function of time and treatment (at 0, 2 and 4 months). Values are pH per replicate, means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E: uncontaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + low fertilizer level (F1) (3 pots per time). Analysis of one soil sample per pot and 2 replicates per sample.

Time months]	Treatment	Unit No.	Replicate No.	PH per replicate	Mean per pot	SD per pot	Mean per treatment	SD per treatment
0	oil		1	6.04			6.11 [*no oil]	0.10
			2	6.18				
	no oil		1	6.83			6.90 [* oil]	0.10
			2	6.97				
2	A	A1	1	6.12	6.10	0.03	6.06 [*E]	0.22
			2	6.08				
		A4	1	5.73	5.75	0.02		
			2	5.76				
		A5	1	6.34	6.32	0.04		
			2	6.29				
		A11	1	6.07	6.10	0.04		
			2	6.12				
	B	B4	1	5.84	5.93	0.13	6.19 [*E]	0.31
			2	6.02				
		B5	1	6.04	6.08	0.05		
			2	6.11				
		B7	1	6.65	6.58	0.11		
			2	6.50				
		B8	1	n.e.	n.e.	n.e.		
			2	n.e.				
	C	C4	1	5.83	5.89	0.08	5.95 [*E]	0.09
			2	5.95				
		C8	1	5.97	6.01	0.06		
			2	6.05				
	D	D4	1	6.60	6.58	0.03	6.26 [*E]	0.38
			2	6.56				
		D9	1	5.93	5.93	0.00		
			2	5.93				
	E	E1. E8. E9		6.91			6.91 [*ABCD]	0.08
				6.99				
				6.83				
4	A	A2	1	5.60	5.64	0.05	5.69 [*E]	0.14
			2	5.67				
		A9	1	5.65	5.57	0.12		
			2	5.48				
		A10	1	5.62	5.71	0.12		
			2	5.79				
		A12	1	5.89	5.87	0.04		
			2	5.84				
	B	B3	1	5.74	5.97	0.32	5.92 [*E]	0.17
			2	6.19				
		B10	1	6.02	5.95	0.10		
			2	5.88				
		B11	1	6.07	5.92	0.21		
			2	5.77				
		B12	1	5.93	5.83	0.15		
			2	5.72				
	C	C5	1	5.97	6.00	0.04	6.17 [*E]	0.20
			2	6.02				
		C9	1	6.31	6.34	0.04		
			2	6.37				
	D	D5	1	6.23	6.33	0.14	6.33 [*E]	0.09
			2	6.43				
		D8	1	6.30	6.34	0.05		
			2	6.37				
	E	E2. E3. E6		6.76			6.70 [*ABCD]	0.11
				6.77				
				6.58				

Table 24: Soil reaction (pH) as a function of time and treatment (at 6 months). Values are pH per replicate, means ± standard deviation (SD) per pot and treatment. Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E: uncontaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + low fertilizer level (F1) (3 pots per time). Analysis of one soil sample per pot and 2 replicates per sample.

Time [months]	Treatment	Unit No.	Replicate No.	pH per replicate	Mean per pot	SD per pot	Mean per treatment	SD per treatment
6	A	A3	1	5.85	5.86	0.01	5.74 [*E]	0.15
			2	5.87				
		A6	1	5.62	5.62	0.01		
			2	5.61				
		A7	1	5.88	5.89	0.01		
			2	5.90				
		A8	1	5.56	5.59	0.04		
			2	5.61				
	B	B1	1	5.75	5.78	0.04	5.82 [*E]	0.12
			2	5.81				
		B2	1	5.64	5.68	0.05		
			2	5.71				
		B6	1	5.91	5.87	0.06		
			2	5.83				
		B9	1	6.02	5.95	0.10		
			2	5.88				
	C	C6	1	5.73	5.71	0.03	5.75 [*E]	0.05
			2	5.69				
		C7	1	5.80	5.79	0.01		
			2	5.78				
	D	D6	1	6.25	6.02	0.33	5.93 [*E]	0.24
			2	5.79				
		D7	1	5.97	5.85	0.18		
			2	5.72				
	E	E4. E5. E7		6.84			6.88 [*ABCD]	0.15
				7.05				
				6.76				

Table 25: Soil reaction (pH). Values are means ± standard deviation (SD) per treatment. Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E: uncontaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + low fertilizer level (F1) (3 pots per time). Analysis of one soil sample per pot and 2 replicates per sample.

Treatment	**Time [months]**	**pH**	
		mean	**SD**
A	**0**	5.90	0.05
	2		
	4		
	6		
B	**0**	6.01	0.10
	2		
	4		
	6		
C	**0**	6.00	0.06
	2		
	4		
	6		
D	**0**	6.16	0.14
	2		
	4		
	6		
E	**0**	6.85	0.10
	2		
	4		
	6		

Table 26: Total oil and grease (TOG) in % of soil (dry weight) per time and treatment (at 0, 2, 4 months). Determination of dry soil fraction and calculation of TOG content. Values are means ± standard deviation (SD). Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E not analyzed (uncontaminated soil). Analysis of one soil sample per pot and 2 replicates per sample. Data $[*^{ABCD}]$ → significant different ($p < 0.05$) to treatments A, B, C, D.

Time [months]	Treatment	Unit No.	Replicate No.	Determination of dry soil fraction					Determination of TOG content							
				Humid soil [g]	Dry soil [g]	Dry soil fraction	Mean	SD	Humid soil [g]	Dry soil [g]	Gain in weight of flask [g]	TOG [%]	Mean	SD	Mean	SD
0			1	14.8530	13.6513	0.9191	0.9153	0.0054	15.4000	14.1700	0.6938	4.90	5.06	0.22	**5.06**	**0.22**
			2	15.6380	14.2529	0.9114			15.3000	14.0800	0.7340	5.21				
2	A	A1	1	15.8329	12.8707	0.8129	0.8145	0.0022	15.1835	12.3669	0.5659	4.58	4.46	0.17	**4.46**	**0.32**
			2	15.9225	12.9941	0.8161			15.5026	12.6268	0.5474	4.34				
		A4	1	15.0370	12.0281	0.7999	0.8101	0.0144	15.5598	12.6051	0.6544	5.19	4.84	0.50		
			2	15.3465	12.5889	0.8203			15.0106	12.1602	0.5451	4.48				
		A5	1	15.3409	12.2792	0.8004	0.8021	0.0024	15.0104	12.0406	0.5017	4.17	4.26	0.13		
			2	15.5282	12.4827	0.8039			15.8811	12.7390	0.5537	4.35				
		A11	1	16.0420	13.2000	0.8228	0.8172	0.0079	15.8020	12.9139	0.5528	4.28	4.30	0.03		
			2	15.0898	12.2473	0.8116			15.0913	12.3331	0.5338	4.33				
	B	B4	1	15.8106	12.7995	0.8096	0.8329	0.0331	15.5046	12.9144	0.5668	4.39	4.06	0.46	**4.43**	**0.38**
			2	16.3546	14.0050	0.8563			15.5942	12.9891	0.4854	3.74				
		B5	1	15.6337	12.6332	0.8081	0.8069	0.0016	15.0900	12.1765	0.5681	4.67	4.74	0.10		
			2	15.2412	12.2809	0.8058			16.1930	13.0665	0.6286	4.81				
		B7	1	16.5569	13.0444	0.7879	0.7880	0.0002	15.8487	12.4890	0.5451	4.36	4.49	0.18		
			2	15.0680	11.8762	0.7882			15.4680	12.1890	0.5627	4.62				
		B8	1	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.		
			2	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.	n.e.				
	C	C4	1	15.0150	12.0949	0.8055	0.7996	0.0084	15.7046	12.5575	0.5461	4.35	4.25	0.14	**4.49**	**0.34**
			2	15.4293	12.2462	0.7937			15.0914	12.0672	0.5007	4.15				
		C8	1	15.3137	12.4221	0.8112	0.8112	0.0000	15.3701	12.4679	0.6159	4.94	4.73	0.30		
			2	n.e.	n.e.	n.e.			15.9438	12.9332	0.5849	4.52				
	D	D4	1	15.6292	12.1554	0.7777	0.7701	0.0108	15.3641	11.8318	0.5027	4.25	4.15	0.14	**4.33**	**0.41**
			2	16.2305	12.3750	0.7625			15.5270	11.9573	0.4852	4.06				
		D9	1	16.0822	13.3132	0.8278	0.8253	0.0036	15.6502	12.9154	0.6384	4.94	4.51	0.61		
			2	15.2566	12.5515	0.8227			15.9350	13.1505	0.5372	4.09				
4	A	A2	1	15.0094	13.6089	0.9067	0.9063	0.0006	15.1347	13.7163	0.5466	3.99	4.11	0.18	**4.14 [*C]**	**0.20**
			2	15.4832	14.0258	0.9059			15.2325	13.8049	0.5851	4.24				
		A12	1	15.3220	12.5929	0.8219	0.8271	0.0073	15.1885	12.5618	0.5402	4.30	4.23	0.10		
			2	15.3130	12.7440	0.8322			15.2146	12.5834	0.5228	4.15				
		A10	1	15.4499	13.6815	0.8855	0.8852	0.0005	15.1727	13.4304	0.5072	3.78	4.00	0.32		
			2	15.0924	13.3538	0.8848			15.1876	13.4436	0.5690	4.23				
		A9	1	15.3206	13.3444	0.8710	0.8707	0.0005	15.1513	13.1916	0.5324	4.04	4.22	0.25		
			2	15.4686	13.4625	0.8703			15.2516	13.2790	0.5836	4.39				
	B	B10	1	15.0296	12.6050	0.8387	0.8350	0.0052	15.3213	12.7930	0.5139	4.02	4.02	0.01	**4.11 [*D]**	**0.29**
			2	15.1466	12.5911	0.8313			15.5313	12.9683	0.5226	4.03				
		B12	1	15.1820	12.9481	0.8529	0.8580	0.0073	15.1502	12.9993	0.6060	4.66	4.43	0.33		
			2	15.0989	13.0333	0.8632			15.2860	13.1158	0.5497	4.19				
		B3	1	15.0302	12.5824	0.8371	0.8399	0.0039	15.4211	12.9524	0.4871	3.76	3.97	0.30		
			2	15.1416	12.7596	0.8427			15.5954	13.0988	0.5481	4.18				
		B11	1	15.5413	13.6608	0.8790	0.8747	0.0061	15.0810	13.1907	0.5585	4.23	4.01	0.32		
			2	15.2209	13.2469	0.8703			15.4998	13.5570	0.5135	3.79				
	C	C5	1	15.0250	12.1340	0.8076	0.8071	0.0006	15.2529	12.3113	0.5432	4.41	4.35	0.09	**4.72 [*A]**	**0.43**
			2	15.0625	12.1510	0.8067			15.1773	12.2503	0.5252	4.29				
		C9	1	15.5116	11.7678	0.7586	0.7470	0.0164	15.0305	11.2283	0.5715	5.09	5.10	0.01		
			2	14.0565	10.3375	0.7354			15.4427	11.5362	0.5890	5.11				
	D	D5	1	15.8820	12.7206	0.8009	0.8008	0.0003	15.1475	12.1295	0.5548	4.57	4.61	0.05	**4.58 [*B]**	**0.05**
			2	15.1040	12.0918	0.8006			15.5271	12.4334	0.5768	4.64				
		D8	1	15.3047	12.3580	0.8075	0.7989	0.0121	15.5895	12.4546	0.5717	4.59	4.56	0.04		
			2	15.0611	11.9036	0.7904			15.1404	12.0958	0.5477	4.53				

Table 27: Total oil and grease (TOG) in % of soil (dry weight) per time and treatment (at 6 months). Determination of dry soil fraction and calculation of TOG content. Values are means ± standard deviation (SD). Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E not analyzed (uncontaminated soil). Analysis of one soil sample per pot and 2 replicates per sample. Data $^{[*ABCD]} \rightarrow$ significant different ($p < 0.05$) to treatments A, B, C, D.

Time [months]	Treatment	Unit No.	Replicate No.	Determination of dry soil fraction					Determination of TOG content							
				Humid soil	Dry soil	Dry soil fraction			Humid soil	Dry soil	Gain in weight of flask	TOG [%]				
				[g]			Mean	SD	[g]				Mean	SD	Mean	SD
6	A	A3	1	20.4500	18.6219	0.9106	0.9120	0.0020	20.0673	18.3018	0.7721	4.22	4.47	0.35	4.32	0.22
			2	20.4815	18.7086	0.9134			20.0800	18.3134	0.8644	4.72				
		A6	1	20.3025	18.9717	0.9345	0.9348	0.0005	20.2112	18.8929	0.7853	4.16	4.27	0.17		
			2	19.9992	18.7011	0.9351			20.2975	18.9735	0.8333	4.39				
		A7	1	20.0927	18.3157	0.9116	0.9104	0.0016	20.2422	18.4294	0.8301	4.50	4.29	0.31		
			2	20.2735	18.4352	0.9093			20.1301	18.3273	0.7452	4.07				
		A8	1	20.1149	18.0815	0.8989	0.9017	0.0039	20.0965	18.1209	0.7464	4.12	4.26	0.20		
			2	20.1618	18.2359	0.9045			20.1238	18.1455	0.7984	4.40				
	B	B1	1	20.2274	18.9106	0.9349	0.9334	0.0021	20.4328	19.0723	0.8265	4.33	4.33	0.01	4.48	0.17
			2	20.0721	18.7059	0.9319			20.3657	19.0097	0.8215	4.32				
		B2	1	20.1231	18.5772	0.9232	0.9215	0.0024	19.9990	18.4286	0.8224	4.46	4.54	0.11		
			2	20.0300	18.4231	0.9198			20.0047	18.4339	0.8511	4.62				
		B6	1	20.7638	19.2839	0.9287	0.9327	0.0056	20.2059	18.8459	0.8713	4.62	4.51	0.16		
			2	20.8058	19.4879	0.9367			20.0996	18.7467	0.8231	4.39				
		B9	1	19.9756	18.9891	0.9506	0.9506	0.0000	20.5476	19.5329	0.9289	4.76	4.54	0.31		
			2	20.9128	19.8802	0.9506			20.0565	19.0661	0.8243	4.32				
	C	C6	1	20.0675	16.9276	0.8435	0.8373	0.0088	20.1118	16.8405	0.7135	4.24	4.26	0.04	4.38	0.16
			2	20.3427	16.9079	0.8312			20.0300	16.7720	0.7190	4.29				
		C7	1	20.0505	16.5608	0.8260	0.8241	0.0026	20.5470	16.9326	0.7795	4.60	4.51	0.13		
			2	20.0117	16.4542	0.8222			20.0360	16.5115	0.7286	4.41				
	D	D6	1	20.0769	17.0798	0.8507	0.8528	0.0029	20.2802	17.2947	0.7496	4.33	4.50	0.24	4.45	0.28
			2	20.2750	17.3323	0.8549			20.3406	17.3463	0.8098	4.67				
		D7	1	20.3766	17.2273	0.8454	0.8477	0.0031	20.5020	17.3788	0.8132	4.68	4.39	0.41		
			2	20.8109	17.6868	0.8499			20.5828	17.4473	0.7150	4.10				

Table 28: Total oil and grease (TOG) in % of soil (dry weight) per time and treatment. Values are means ± standard deviation (SD) and decrease of TOG in % [1-TOG $_n$ / initial TOG. n = 0, 2, 4, 6 months]. Treatment A: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + medium fertilizer level (F2) (4 pots per time); Treatment B: PHC-contaminated soil + plants (*Vetiveria zizanioides* (L.) Nash) + high fertilizer level (F3) (4 pots per time); Treatment C: PHC-contaminated soil + medium fertilizer level (F2). no plants (2 pots per time); Treatment D: PHC-contaminated soil + high fertilizer level (F3). no plants (2 pots per time); Treatment E not analyzed (uncontaminated soil). Analysis of one soil sample per pot and 2 replicates per sample. Data $^{[*ABCD]} \rightarrow$ significant different ($p < 0.05$) to treatments A, B, C, D.

Time [months]	Treatment	TOG [% of soil dry wt]		
		Mean	SD	Decrease [%]
0	**A**	5.06	0.22	0
	B	5.06	0.22	0
	C	5.06	0.22	0
	D	5.06	0.22	0
2	**A**	4.46	0.32	12
	B	4.43	0.38	12
	C	4.49	0.34	11
	D	4.33	0.41	14
4	**A**	4.14 [*C]	0.20	18
	B	4.11 [*D]	0.29	19
	C	4.72 [*A]	0.43	7
	D	4.58 [*B]	0.05	9
6	**A**	4.32	0.22	15
	B	4.48	0.17	11
	C	4.38	0.16	13
	D	4.45	0.28	12

Table 29: Bivariate correlation of root biomass in g and TOG decrease in % of soil dry weight. Degree of intensity is the Pearson's correlation coefficient for normal-distributed variables. Treatment A: PHC-contaminated soil + medium fertilizer level (F2) (n=12 pots); Treatment B: PHC-contaminated soil + high fertilizer level (F3) (n=12 pots). Treatments C, D, E not analyzed.

Treatment A

		ROOT	TOG
ROOT	**Pearson Correlation**	1.00	**0.05**
	Significance (2-tailed)		0.90
	N	9.00	9.00
TOG	**Pearson Correlation**	**0.05**	1.00
	Significance (2-tailed)	0.90	
	N	9.00	9.00

Treatment B

		ROOT	TOG
ROOT	**Pearson Correlation**	1.00	**-0.19**
	Significance (2-tailed)		0.62
	N	9.00	9.00
TOG	**Pearson Correlation**	**-0.19**	1.00
	Significance (2-tailed)	0.62	
	N	9.00	9.00