Minimal Node Design		Price in USD estimated Power cons	Buy Link	Instructables / Comments														
olarcell		0,45 - 0-60mA @5V	https://de.aliex	pn														
oist soil sensor		0,22 <20mA	https://de.aliex	pr can be used to measure EC														
ight	KY-018	0,2	https://de.aliex	press.com/item/32900363698.ht	ml?spm=a2g0o.pr	oductlist.0.0.3f01434atp	pEYf9&algo_pvid=f068456	e-c092-4d62-8bd9-78ff	bfb1b50e&algo_expid=f068456e-c	:092-4d62-8bd9-78f	fbfb1b50e-1&btsid	=df5bae62-aa7f-4	aa1-a91a-c6ee7	05d21d&ws_ab	test=searchweb0	0,searchweb2016	302 9,searchweb2	201603 52
Batterie	TR 5000mAh 14500 3,7 V Lithiu	ır 0,33	https://de.aliex	press.com/item/4000215881979	.html?spm=a2g0o.	.productlist.0.0.1718479	91aLUiJP&algo_pvid=e1al	88cf-eb6f-48df-a2c4-29	527e1bcb8a&algo_expid=e1af38	:f-eb6f-48df-a2c4-2	9527e1bcb8a-0&bt	sid=c0852d38-6e	85-4623-856c-9a	1e23b5a5c7&ws	ab_test=searchwe	b0_0,searchweb	201602_1,searchy	veb201603_52
LoRa Communication	lora nrf4438	2,87 <100mA \ <13mA	https://de.aliex	pn Range ~2km														
ATtiny85	ATtiny85	1,07 2mA	https://de.aliex	press.com/item/32674596029.ht	ml?spm=a2g0o.pr	oductlist.0.0.13b758d8v	wp0Rwm&algo_pvid=c004	f43-bf07-41b4-840b-e	49bc425f29c&algo_expid=c0047f	13-bf07-41b4-840b-	e49bc425f29c-338	btsid=2e9ee964-8	3610-4406-9473-	74e5d992ef7c&w	s_ab_test=searchy	veb0_0.searchwe	b201602_1.search	hweb201603_52
Hygrometer / Temperature	DHT11	0,57	https://de.aliex	press.com/item/1859091606.htm	nl?spm=a2g0o.pro	ductlist.0.0.c9a159e6w	PmMau&algo_pvid=98e47	:54-cb51-46eb-9ae0-9	c0f27893e14&algo_expid=98e47c	54-cb51-46eb-9ae0	1-9c0f27893e14-68	btsid=5b9a5b55-6	3d51-4810-b5f7-f	12957815c2&ws	ab_test=searchw	eb0_0.searchwel	201602_1.search	web201603_52
Air Pressure / Temperature	BMP280	0,49	https://de.aliex	https://de.ailexpress.com/item/32988169737.htm/?spm=2g0o.productiist.0.0.4546cc6dm/xdT2Q8aigo_pvid=2de0c814-8842-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8842-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8842-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i6233a48e28aigo_expid=2de0c814-8642-463b-8ea6-0/i623a48e28aigo_expid=2de0c814-8642-4640-8642-4640-8642-4640-8642-4640-8642-4640-8642-4640-8642-4640-8642-4640-8642-4640-8642-46											hweb201603_52			
		6,2 \$																
Geophone Node Design																		
additional to the parts above:																		
Piezo Vibration Sensor	LDT0-028K	3,67	https://de.aliex	pn https://www.instr.https://githu	b.con Needs some	modifications for the ri	ght frequency, see instruc	ables										
ATMega	atmega2560	4,93	https://www.ali	https://www.aliex attiny is not powerful enough to calculate and save the date of the geophone, so we need a mega														
		13,73 \$																
Central Node																		
Raspberry Pi Zero W		12,11	https://www.ali	express.com/item/40002145039	01.html?spm=a2gl	0o.productlist.0.0.17ad	335cbmM5vy&algo_pvid=1	621bfeb-2310-453b-83	29-2fd32002b8c2&algo_expid=16	21bfeb-2310-453b-	8329-2fd32002b8c	2-20&btsid=21bae	627-a0e7-4216-	c68-888c073de0	51&ws_ab_test=s	earchweb0_0.sea	rchweb201602_1	searchweb201603
ouchScreen 320x480		8,99	https://www.ali	express.com/item/32587995145	.html?spm=a2g0o.	productlist.0.0.7e512de	efPWyp9x&algo_pvid=489	ad0a-5625-49b7-9e91	-5763231fad90&algo_expid=4893	ad0a-5625-49b7-9e	91-5763231fad90	-0&btsid=f853321	2-0907-4081-99b	9-4a4911b948df8	ws_ab_test=searc	hweb0_0,search	web201602_1.sea	rchweb201603_52
SSM / GPS - Module		12,8	https://www.ali	ex With this we collect the data	via WWW and can	mark the geolocation o	f the sensor probes											
oRa Communication		2,87	https://de.aliex	press.com/item/32983370118.ht	ml?spm=a2g0o.pr	oductlist.0.0.2f54fd53v4	4Zw2f&algo_pvid=7df3e88	2-2f75-473e-966c-e2dd	739eced2&algo_expid=7df3e882-	2f75-473e-966c-e2	dc739eced2-4&bts	id=37e2efe2-1dbb	o-4aa1-8b7a-726	1754e859&ws_a	b test=searchweb	0 0,searchweb2l	01602 1,searchwe	eb201603 52
		36,77 \$																