

## Appendices

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### Appendix A: Lineament orientation (degree) in the study area.

Northern Part	55,72,82,340,335,333,337,337,338,335,346,307,345,285,335,354,337,45,10,57,335,2,75,328,18,79,22,32,329,343,344,304,34,41,23,24,27,55,279,275,27,25,315,36,315,304,298,304,298,35,34,39,2,43,89,76,23,54,77,45,315,335,40,88,328,88,329,331,23,64,66,70.
Central Part	315,88,359,55,60,303,347,315,15,335,323,302,322,277,274,352,277,70,70,303,54,315,45,45,276,279,281,314,300,315,277,285,326,343,341,342,342,285,355,359,355,88,88,80,30,340,338,83,336,295,346,321,333,303,330,340,78,333,280,303,347,70,60,60,70,70,315,80,83,336,68,70,45,75,275,277,70,60,28,70,72,28,332,85,27,65,
Southern Part	342,342,284,340,342,285,322,283,322,330,345,344,355,18,331,18,355,280,80,58,63,290,283,315,285,364,363,283,320,284,283,346,297,50,305,25,297,315,77,280,77,25,320,77,280,54,78,70,49,49,50,315,345,345,290,291,290,290,60,340,340,293,60,293,340,340,345,60,353,298,340,8,290,290,290,348,305,338,300,294,57,20,295,295,305,322,305,310

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### **Appendix B:** Ground truth investigation on supposing salt affected areas derived from land use classification and saline soil map of the study area.

Date	Station	UTM E	UTM N	Elevation (m)	Remark
15.Oct.03	St.1	201705	1674582		Ponds
17.Oct.03	St.2	187212	1695903		Salt crust in paddy field
	St.3	184202	1700355		Salt crust in paddy field, saline groundwater
	St.4	182649	1710459		Salt crust in paddy field
	St.5	179797	1722809		Salt crust in paddy field
	St.6	178494	1723987		Salt crust in paddy field
	St.7	178929	1725524		Salt crust in paddy field
	St.8	180016	1726134		Salt crust in paddy field
18.Oct.03	St.9	198033	1667780		Salt crust in paddy field
	St.10	199589	1667951		Swampy area has no salt crust
	St.11	208702	1670856		Salt mine
	St.12	206443	1675758		Salt crust in swampy area in NEE direction
	St.13	205757	1679357		Salt crust in swampy area & Paddy fields
4.Dec.03	St.14	184701	1695910	208	Salt crust around reservoir
	St.15	185922	1695408	202	Salt crust in paddy field (thin crust)
	St.16	186051	1695466	206	Salt crust in paddy field (thin crust)
	St.17	190246	1697407	196	Salt crust in paddy field
	St.18	193820	1691524	174	Salt crust in paddy field
	St.19	161733	1722273	196	Marshy area has white sandy soil
	St.20	165484	1724107	192	Salt crust in paddy field (thick crust)
	St.21	169414	1725822	194	Salt crust in waste land opposite of salt mine
	St.22	171640	1724230	200	Salt crust in waste land
	St.23	173233	1720296	207	Salt crust in paddy field
	St.24	175242	1723713	209	Salt crust in waste land
	St.25	175805	1723951	207	Salt crust in paddy field
	St.26	177810	1724766	198	Marshy area
	St.27	179012	1725855	199	Marshy area
	St.28	179719	1726442	199	Salt crust in Marshy area in Waste land
	St.29	181009	1729835	189	Marshy area
7.Dec.03	St.30	153524	1686012	216	Salt crust in paddy field
	St.31	153871	1687847	217	Salt crust in paddy field
	St.32	152730	168782	218	Salt crust in paddy field and in water trench
	St.33	151574	1689388	222	Salt crust around pond having brackish water
	St.34	147308	1694577	214	Salt crust in paddy field
	St.35	148072	1695210	215	Salt crust in paddy field
	St.36	149602	1694635	214	Salt crust in paddy field
	St.37	150655	1695311	217	Salt crust in paddy field
8.Dec.03	St.38	167751	1667468	198	Salt crust in waste land
	St.39	166182	1671184	200	Salt crust around reservoir
	St.40	165503	1673299	209	Salt crust in paddy field
	St.41	164302	1675367	202	Salt crust in paddy field and in waste land
	St.42	161095	1676789	200	Salt crust in paddy field
	St.43	157739	1680355	203	Salt crust in paddy filed
	St.44	156813	1684076	213	Salt crust around reservoir (thick crust)

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	St.45	160342	1684086	204	Salt crust in paddy field and in waste land
	St.46	167239	1683867	207	Salt crust in paddy field
	St.47	168903	1681515	195	Marshy area
	St.48	168796	1675915	200	Salt crust in paddy field
	St.49	168465	1674242	194	Salt crust in paddy field (thick crust)
	St.50	165819	1693292	205	Salt crust in paddy field having salty water
	St.51	167499	1694944	214	Salt crust in waste land
9.Dec.03	St.52	166024	1694087	217	Salt crust in paddy field
	St.53	177080	1692766	207	Salt crust in waste land
	St.54	185214	1683575	184	Salt crust in waste land
	St.55	193278	1690120	182	Salt crust in paddy field
	St.56	194222	1691497	182	Salt crust in waste land
	St.57	194987	1696920	193	Salt crust in paddy field (thin crust)
	St.58	199964	1693519	179	Salt crust in paddy field
	St.59	206119	1676040	173	Salt crust in paddy field
4.Jan.04	St.60	222308	1699490	160	Salt crust in paddy field
	St.61	222183	1700647	176	Salt crust in waste land
	St.62	216450	1705650	172	Salt crust in waste land
	St.63	219375	1705750	168	Salt crust in paddy field
	St.64	226875	1701650	155	Salt crust in paddy field (very thin)
	St.65	227175	1704450	154	Salt crust in waste land (thin crust)
	St.66	224725	1707150	155	Salt crust in paddy field (thin crust)
	St.67	223850	1707075	154	Salt crust in waste land nearby paddy field
	St.68	225175	1707850	155	Salt crust in paddy field (thin crust)
	St.69	226150	1708475	151	Salt crust in paddy field (thick crust)
	St.70	226850	1709350	151	Salt crust in paddy field (thick crust)
	St.71	229450	1708475	155	Salt crust in paddy field (thin crust)having salty water
	St.72	230675	1706225	148	Salt crust in paddy field
6.Jan.04	St.73	199682	1667601	95	Salt crust in swampy area
	St.74	209150	1671250	95	Salt crust in paddy field
	St.75	210531	1673481	142	Salt crust in paddy field
	St.76	215755	1680485	147	Salt crust in waste land and in water trench
	St.77	222176	1693079	160	Salt crust in paddy field (very thin crust)
	St.78	219227	1693686	166	Salt crust in paddy field
	St.79	215770	1696651	165	Salt crust in paddy field (thin crust)
	St.80	213459	1696579	164	Salt crust in paddy field having salty water
	St.81	211351	1697528	166	Salt crust in paddy field (thin crust)
	St.82	209997	1699152	170	Salt crust in paddy field (thin crust)
	St.83	207816	1701228	179	Salt crust in paddy field (thin crust)
	St.84	205300	1702681	184	Salt crust in paddy field
	St.85	204250	1703529	178	Salt crust in paddy field
	St.86	203310	1705532	194	Salt crust in waste land (very thick crust)
	St.87	198895	1703564	201	Salt crust in paddy field (thin crust)
	St.88	197621	1703119	196	Salt crust in paddy field (thin crust)
	St.89	196333	1700407	207	Salt crust in waste land (thin crust)
	St.90	192043	1698991	201	Dried soil
13.Jan.04	St.91	139710	1698544	259	Salt crust in corn field on elevated area
	St.92	141526	1700404	240	Salt crust in small wasted area within corn filed on (elevated area)

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	St.93	142777	1700417	244	Salt crust in small wasted area within sugar cane filed on elevated area
	St.94	144118	1705193	235	Salt crust in paddy field
	St.95	145258	1708776	224	Salt crust in waste land
	St.96	142252	1707347	227	Salt crust in paddy field
	St.97	144427	1711749	227	Salt crust in waste land
	St.98	144751	1715479	226	Salt crust in waste land
	St.99	141651	1715612	240	Salt crust in waste land (thin crust)
	St.100	141301	1711819	232	Salt crust in paddy field (thin crust)
	St.101	140261	1711270	224	Salt crust in waste land
	St.102	146641	1710310	225	Salt crust in paddy field
	St.103	146648	1711658	211	Salt crust in waste land and in paddy field
	St.104	149637	1712323	214	Salt crust in waste land (very thick crust)
14.Jan.04	St.105	174889	1696054	201	Salt crust in waste land
	St.106	175158	1697513	205	Salt crust in paddy field
	St.107	175263	1699687	204	Salt crust in waste land
	St.108	177656	1701946	208	Salt crust in paddy field
	St.109	188229	1713476	202	Salt crust in paddy field
	St.110	188480	1714894	210	Salt crust in waste land
	St.111	190525	1719302	203	Salt crust in paddy field
	St.112	190281	1722348	194	Salt crust in waste land and in paddy field
	St.113	190044	1724969	200	Salt crust in waste land
	St.114	188320	1725843	200	Salt crust in paddy field (thin crust)
	St.115	190717	1727694	192	Salt crust in paddy field
	St.116	193580	1730582	195	Salt crust in paddy field
	St.117	194346	1731694	193	Salt crust in paddy field
	St.118	221061	1728432	175	Salt crust in paddy field
	St.119	225285	1724567	174	Salt crust in waste land
	St.120	226280	1723484	184	Salt crust in paddy field
	St.121	229121	1721779	170	Salt crust in paddy field
	St.122	230328	1720986	162	Salt crust in waste land
15.Jan.04	St.123	169448	1649541	200	Salt crust in paddy field
	St.124	168324	1647075	213	Salt crust in paddy field (thin crust)
	St.125	157116	1646802	218	Salt crust in paddy field
	St.126	159219	1651523	218	Salt crust on irrigation canal pavement
	St.127	161122	1653619	225	Salt crust on irrigation canal pavement
	St.128	168460	1649855	216	Salt crust in waste land and in paddy field

**Appendix C:** Photographs of saline soil samples which were measured their reflectance spectra by the Infrared Intelligent Spectroradiometer (IRIS)-GER Mark V.



Sample No.	Location (UTM Zone 48, Thai/Vietnam Datum)		Description
1	186781	1696198	Dark grey very fine - grained sand mixing with organic matter and covered with thin salt crust
2	193820	1691524	Pinkish - white fine - grained sand covered with thick salt crust (~ 2 mm)
3	161733	1722273	Pinkish - white medium - grained sand with very thin salt crust covered (< 1 mm)
4	165484	1724107	Pinkish-white fine-grained sand covered with thin dark grey clay and thick salt crust (~ 2 mm) respectively
5	169141	1725822	Pinkish - white fine - grained sand covered with thin dark grey clay and thick salt crust (~ 2 mm) respectively
6	171640	1724230	Dark grey very fine - grained sand mixing with organic matter (~ 15%) and covered with thin salt crust
7	173233	1720296	Dark grey fine-grained sand covered with thick salt crust (~ 2 mm)
8	177810	1724766	Pinkish - white fine - grained sand covered with thick salt crust (~ 2 mm)
9	179719	1726442	Pinkish - white fine - grained sand covered with thick salt crust (~ 2 mm)
10	153871	1687847	Pinkish - white fine - grained sand covered with thick salt crust (~ 2 mm)
11	151574	1689388	Pinkish - white fine-grained sand covered with thick salt crust (~ 1 – 1.5 mm)
12	150655	1695311	Pinkish-white fine-grained sand covered with thin salt crust (~ 0.5 - 1 mm)
13	167751	1667468	Pinkish - white fine - grained sand covered with thin dark grey clay and thin salt crust (~ 1 mm) respectively
14	156813	1684076	Pinkish - white fine - grained sand covered with thick salt crust (~ 2 mm)
15	227175	1704450	Reddish - brown fine-grained sand covered with thick salt crust (~ 2 mm)

**Appendix D:** Reflectance spectra of saline soils in the western Khorat Plateau, NE Thailand. The saline soil absorption feature at 1750 nm is marked by the red dashed line.

