

DATA 3
HYDROGEOLOGICAL SURVEY

Table		Existing Well Survey		Date	2007 June 27
Existing well name	P1 Dug Well 1		Owner	CPC & Dr. Ng Van Loi	
Province Name	Phu Yen		Latitude	13.29807 °N	
Commune Name	Xuan Phuoc		Longitude	109.06469 °E	
Specification of existing well	Date of installation		2002		
	Diameter (m)		1.00		
	Depth (m)		9.00		
	Height of well collar (G.L.+m)		0.07		
	Type of pumping		Pump		
	Casing length (m)		8.93		
	Screen depth (m)		No screen		
	Geology		sand & fine gravel (weatered rock)		
	Aquifer		sand & fine gravel (weatered rock)		
	Static groundwater level (m)		4.75		
General condition of pumping volume from interviewee	Daily volume		2 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	No			
	3) Metalic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use		-----		
	3) Number of users		CPC & one household		
<i>Water quality measurement</i>	Temperature (°C)	29.7	pH	6.85	
	Conductivity (mS/m)	49.6	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		not available (concrete lid with key)		
	Water usage condition		daily		
Related feature	Geological feature		sand		
	Topographical feature		flat plain with gentle slope		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No livestock		

1. This is a deepest and water richest well.

Table		Existing Well Survey		Date	2007 June 28
Existing well name	P2 Dug Well 1		Owner	An Dinh School	
Province Name	Phu Yen		Latitude	13.31715 °N	
Commune Name	An Dinh		Longitude	109.18502 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.00		
	Depth (m)		6		
	Height of well collar (G.L.+m)		0.96		
	Type of pumping		bucket		
	Casing length (m)		5.04		
	Screen depth (m)		No screen		
	Geology		mud and sand		
	Aquifer		sand		
	Static groundwater level (m)		3.90		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		-----		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other (fluoride)				
Water usage	1) Purpose and quantity of use		Drinking and water to garden		
	2) Frequency of use		daily		
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	28.1	pH	6.81	
	Conductivity (mS/m)	53.8	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		sediment		
	Topographical feature		falt		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

Table		Existing Well Survey		Date	2007 June 29
Existing well name	P3 Dug Well 3		Owner	Tran Ngoc Quang	
Province Name	Phu Yen		Latitude	13.18991 °N	
Commune Name	An Tho		Longitude	109.23939 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.16		
	Depth (m)		4.80		
	Height of well collar (G.L+m)		0.80		
	Type of pumping		Pump		
	Casing length (m)		4.00		
	Screen depth (m)		No screen		
	Geology		sand, gravel, rocks		
	Aquifer		rocks		
	Static groundwater level (m)		2.90		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking and daily activity		
	2) Frequency of use				
	3) Number of users		about 20 people and livestock		
<i>Water quality measurement</i>	Temperature (°C)	28.3	pH	7.09	
	Conductivity (mS/m)	63.2	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		talus deposit or weathered rock		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		Cattle and chicken		

1. The owner was not able to dig deeper, because the bottom of the well was hard weathered rock.

Table		Existing Well Survey		Date	2007 July 2
Existing well name	P4 Drilled Well 2		Owner	Pagoda	
Province Name	Phu Yen		Latitude	13.20276 °N	
Commune Name	An My		Longitude	109.27615 °E	
Specification of existing well	Date of installation		2007 April		
	Diameter (m)		0.11 (PVC)		
	Depth (m)		80.00		
	Height of well collar (G.L+m)		0.13		
	Type of pumping		Pump		
	Casing length (m)		78		
	Screen depth (m)		2		
	Geology		sand and rock		
	Aquifer		rock		
	Static groundwater level (m)		-----		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion in this year		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking, daily activity		
	2) Frequency of use				
	3) Number of users		5 people and garden		
<i>Water quality measurement</i>	Temperature (°C)	28.1	pH	7.64	
	Conductivity (mS/m)	345	Salinity(%)	0.18	
Availability for water level monitoring	Well structure		Not available for water level monitoring		
	Water usage condition		daily		
Related feature	Geological feature		sand and rock		
	Topographical feature		flat (flood plain)		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. This is the deepest well in the commune.

Table		Existing Well Survey		Date	2007 July 3
Existing well name	P5 Test Drilled Well 2		Owner	Public	
Province Name	Phu Yen		Latitude	13.17017 °N	
Commune Name	Son Phuoc		Longitude	108.95650 °E	
Specification of existing well	Date of installation		No information		
	Diameter (m)		No information		
	Depth (m)		No information		
	Height of well collar (G.L+m)		No information		
	Type of pumping		No equipment for drawing up groundwater		
	Casing length (m)		No information		
	Screen depth (m)		No information		
	Geology		No information		
	Aquifer		No information		
	Static groundwater level (m)		No information		
General condition of pumping volume from interviewee	Daily volume		No information		
	Monthly volume		No information		
	Yearly volume		No information		
	Depletion period, if any		No information		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use				
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)		pH		
	Conductivity (mS/m)		Salinity(%)		
Availability for water level monitoring	Well structure				
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

Table		Existing Well Survey		Date	2007 July 4
Existing well name	P6 Dug Well 1		Owner	Thai Hong Tan	
Province Name	Phu Yen		Latitude	13.09131 °N	
Commune Name	Ea Cha Rang		Longitude	108.88815 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.10		
	Depth (m)		12.40		
	Height of well collar (G.L+m)		0.70		
	Type of pumping		Pump		
	Casing length (m)		11.70		
	Screen depth (m)		No screen		
	Geology		sand and rock		
	Aquifer		sand and rock		
	Static groundwater level (m)		7.01		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use				
	3) Number of users		10 people		
<i>Water quality measurement</i>	Tmeperature (°C)	27.1	pH	7.68	
	Conductivity (mS/m)	106.2	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		sand and volcanic rock		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		bad: no prevetion against rain surface water intrusion		

1. The well is quantity richest and deepest dug well in the commune.

Table		Existing Well Survey		Date	2007 July 5
Existing well name	P7 Dug Well 1		Owner	Oi Sa (Public Well)	
Province Name	Phu Yen		Latitude	13.09665 °N	
Commune Name	Suoi Bac		Longitude	108.95118 °E	
Specification of existing well	Date of installation		2000		
	Diameter (m)		1.15		
	Depth (m)		9.40		
	Height of well collar (G.L+m)		0.93		
	Type of pumping		Pump		
	Casing length (m)		8.47		
	Screen depth (m)		No screen		
	Geology		unknown		
	Aquifer		unknown		
	Static groundwater level (m)		7.12		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	unknown			
	3) Metallic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		unknown		
	2) Frequency of use				
	3) Number of users				
Water quality measurement	Temperature (°C)	27.3	pH	7.49	
	Conductivity (mS/m)	125.7	Salinity(%)	0.06	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		unknown		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The well is quantity richest and has highest water quality.

Table		Existing Well Survey		Date	2007 July 7
Existing well name	P8 Dug Well 1		Owner	Nguyen Van Ha	
Province Name	Phu Yen		Latitude	12.99002 °N	
Commune Name	Son Thanh Dong		Longitude	109.09206 °E	
Specification of existing well	Date of installation		2000		
	Diameter (m)		1.40		
	Depth (m)		14.80		
	Height of well collar (G.L+m)		0.06		
	Type of pumping		Pump		
	Casing length (m)		14.74		
	Screen depth (m)		No screen		
	Geology		sand		
	Aquifer		sand		
	Static groundwater level (m)		13.05		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use				
	3) Number of users		1 household (5 people)		
<i>Water quality measurement</i>	Tmeperature (°C)	28.5	pH	7.36	
	Conductivity (mS/m)	20.3	Salinity(%)	0.01	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		soil		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The well has high water quality.

Table		Existing Well Survey		Date	2007 June 25
Existing well name	K1 Dug Well 4 (5)		Owner	Public	
Province Name	Khanh Hoa		Latitude	12.01308°N	
Commune Name	Cam An Bac		Longitude	109.11587°E	
Specification of existing well	Date of installation		2005		
	Diameter (m)		1.13		
	Depth (m)		difficullt to measure for muddy bottom		
	Height of well collar (G.L+m)		0.70		
	Type of pumping		Bucket		
	Casing length (m)		-----		
	Screen depth (m)		No screen		
	Geology		sand & gravel		
	Aquifer		sand & gravel		
	Static groundwater level (m)		6.16		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		-----		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes		little	
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Washing and bath		
	2) Frequency of use				
	3) Number of users		3 households, about 15 people		
<i>Water quality measurement</i>	Tmperature (°C)	30.1	pH	6.80	
	Conductivity (mS/m)	210	Salinity(%)	0.10	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition		Daily		
Related feature	Geological feature		sand & gravel		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage				

1. There is a muddy sediment at the well bottom.
2. There are garbage on the surface of the groundwater in the well.

Table		Existing Well Survey		Date	2007 June 26
Existing well name	K2 Dug Well 3		Owner	Dao Dinh Dung	
Province Name	Khanh Hoa		Latitude	12.02901 °N	
Commune Name	Cam Hiep Nam		Longitude	109.12687 °E	
Specification of existing well	Date of installation		1992		
	Diameter (m)		0.90		
	Depth (m)		3.82		
	Height of well collar (G.L.+m)		0.60		
	Type of pumping		Bucket		
	Casing length (m)		3.22		
	Screen depth (m)		No screen		
	Geology		sand		
	Aquifer		sand		
	Static groundwater level (m)		2.40		
General condition of pumping volume from interviewee	Daily volume		1 m ³		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking, cooking, washing, bath		
	2) Frequency of use		daily		
	3) Number of users		one household		
<i>Water quality measurement</i>	Temperature (°C)	28.5	pH	6.04	
	Conductivity (mS/m)	39.4	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition		daily use		
Related feature	Geological feature		sediment		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The groundwater has fluoride problem.
2. The owner use a kind of filter to remve fluoride. The filter consist of coal, gravel and small rocks. They believe the filter can remove fluoride.

Table		Existing Well Survey		Date	2007 July 9
Existing well name	K3 Dug Well 4		Owner	Le Ngoc Bich	
Province Name	Khanh Hoa		Latitude	12.09942 °N	
Commune Name	Cam Hai Tay		Longitude	109.15484 °E	
Specification of existing well	Date of installation		1989		
	Diameter (m)		0.95		
	Depth (m)		4.15		
	Height of well collar (G.L+m)		0.60		
	Type of pumping		pump		
	Casing length (m)		3.55		
	Screen depth (m)		No screen		
	Geology		coarse sand		
	Aquifer		coarse sand		
	Static groundwater level (m)		1.28		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	Yes			
	3) Metalic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		washing, every day's activity		
	2) Frequency of use				
	3) Number of users				
Water quality measurement	Temperature (°C)	29.8	pH	6.57	
	Conductivity (mS/m)	141.5	Salinity(%)	0.07	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daliy use		
Related feature	Geological feature		sand		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		not protected		

1. In this area, three wells were drilled. The maximum depth reached 60 m, however, there were insufficient groundwater.

Table		Existing Well Survey		Date	2007 July 11
Existing well name	N-1 Dug Well 13		Owner	Nguyen Hiep	
Province Name	Ninh Thuan		Latitude	11°36.050 N	
Commune Name	Nhon Hai		Longitude	109°06.445 E	
Specification of existing well	Date of installation				
	Diameter (m)		7.00		
	Depth (m)		6.20		
	Height of well collar (G.L+m)		the top of well is under 1 m from the ground		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		5.10		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	31.1	pH	8.73	
	Conductivity (mS/m)	56.6	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		2 km from the sea coast		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 July 12
Existing well name	N-2 Dug Well 2		Owner	Huu Hieu Trach	
Province Name	Ninh Thuan		Latitude	11°48.099 N	
Commune Name	Cong Hai		Longitude	109°06.100 E	
Specification of existing well	Date of installation				
	Diameter (m)		1.00		
	Depth (m)		6.38		
	Height of well collar (G.L+m)		0.65		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		3.46		
General condition of pumping volume from interviewee	Daily volume		much water		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		no depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	Yes	kind	weak	
	4) the other				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	30.7	pH	6.99	
	Conductivity (mS/m)	102.4	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		low land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 July 10
Existing well name	N-3 Dug Well 5		Owner	Mang Dung	
Province Name	Ninh Thuan		Latitude	11°39.373 N	
Commune Name	Bac Son		Longitude	109°06.025 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		7.75		
	Height of well collar (G.L+m)		0.56		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		4.50		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains 1.5 m from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	30.5	pH	7.20	
	Conductivity (mS/m)	56.7	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		small basin		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. The public water supply system is already provided in Xom Bang village but of shortage in dry season.
2. In this village, they use the public water supply system and dug wells.

Table		Existing Well Survey		Date	2007 July 6
Existing well name	N-4 Dug Well 5		Owner	Trinh Van Nuo (Restaurant)	
Province Name	Ninh Thuan		Latitude	11°24.092 N	
Commune Name	Phouc Minh		Longitude	108°53.666 E	
Specification of existing well	Date of installation				
	Diameter (m)		2.23		
	Depth (m)		4.90		
	Height of well collar (G.L+m)		0.27		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		0.98		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		no depletion, even in dry season they get much water		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other : dirty				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	29.9	pH	6.75	
	Conductivity (mS/m)	95.6	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		in salt fields		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. The householder is selling the water of this well for drinking water.

Table		Existing Well Survey		Date	2007 July 9
Existing well name	N-5 Dug Well 7		Owner	Nguyen Hoang Nhat	
Province Name	Ninh Thuan		Latitude	11°31.393 N	
Commune Name	Phouc Hai		Longitude	108°57.786 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.72		
	Depth (m)		3.49		
	Height of well collar (G.L+m)		0.29		
	Type of pumping		bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		2.44		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes	strong		
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Not drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	30.5	pH	7.37	
	Conductivity (mS/m)	401	Salinity(%)	0.21	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		on the sand hill		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. This well is located in Tu tam 1 village.

Table		Existing Well Survey		Date	2007 July 5
Existing well name	N-6 Dug Well 1		Owner	Cultural house in Tu Thien	
Province Name	Ninh Thuan		Latitude	11°28.032 N	
Commune Name	Phuoc Dinh		Longitude	109°00.617 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)				
	Height of well collar (G.L+m)		0.63		
	Type of pumping				
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		4.55		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains a little from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	unknown			
	3) Metalic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use				
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	29.4	pH	8.47	
	Conductivity (mS/m)	105.1	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 July 3
Existing well name	B-1 Dug Well 1		Owner	Tran Tiem	
Province Name	Binh Thuan		Latitude	10°58.362 N	
Commune Name	Muong Man		Longitude	108°00.394 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		10.00		
	Height of well collar (G.L+m)		0.20		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		4.10		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		in dry season ,dry up		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes			
	3) Metalic taste	Yes	kind		
	4) the other : light yellow color				
Water usage	1) Purpose and quantity of use		Not drinking		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	27.4	pH	7.44	
	Conductivity (mS/m)	255	Salinity(%)	0.13	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1.They say that 7~8 wells around this area have salinization.

Table		Existing Well Survey		Date	2007 July 2
Existing well name	B-2 Dug Well 4		Owner	Nguyen Van Quyet	
Province Name	Binh Thuan		Latitude	11°03.176 N	
Commune Name	Gia Huynh		Longitude	107°36.916 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.90		
	Depth (m)		5.00		
	Height of well collar (G.L+m)		1.73		
	Type of pumping				
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		1.35		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	Yes	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking and others		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	28.0	pH	6.57	
	Conductivity (mS/m)	35.7	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature		sedimentary		
	Topographical feature		low land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The water of this dug well remains 2m above the bottom in dry season.

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-3 Dug Well 2		Owner	Nguyen Thi Kiem	
Province Name	Binh Thuan		Latitude	11°13.871 N	
Commune Name	Nghì Duc		Longitude	107°39.853 E	
Specification of existing well	Date of installation				
	Diameter (m)		1.00		
	Depth (m)		6.37		
	Height of well collar (G.L+m)		0.68		
	Type of pumping		pump & bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.11		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		in dry season, water remains very little from the bottom		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	28.5	pH	5.10	
	Conductivity (mS/m)	8.41	Salinity(%)	0	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 June 29
Existing well name	B-4 Dr-3		Owner	Nguyen Chung	
Province Name	Binh Thuan		Latitude	10°50.039 N	
Commune Name	Tan Duc		Longitude	107°34.886 E	
Specification of existing well	Date of installation				
	Diameter (m)				
	Depth (m)		25.00		
	Height of well collar (G.L+m)				
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology		granite		
	Aquifer		weathered granite		
	Static groundwater level (m)				
General condition of pumping volume from interviewee	Daily volume		much water		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and others		
	2) Frequency of use		contineous pumping from 7.00 to 21:00		
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	28.1	pH	6.74	
	Conductivity (mS/m)	55.3	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		Not available		
	Water usage condition				
Related feature	Geological feature		granite		
	Topographical feature		on the top of rolling hills		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-5 Dug Well 4		Owner	Le Phuong Tinh	
Province Name	Binh Thuan		Latitude	11°14.205 N	
Commune Name	Me Pu		Longitude	107°36.926 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		6.00		
	Height of well collar (G.L+m)		0.66		
	Type of pumping		pump & bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.12		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains a little from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	Yes	kind	only in dry season	
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	28.6	pH	4.28	
	Conductivity (mS/m)	36.6	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature		sedimentary		
	Topographical feature		Flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		apart from about 5 m from the pig-cote		

1. This well is located next to the market.

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-6 Dug Well 4		Owner	Nguyen Van Hung	
Province Name	Binh Thuan		Latitude	11°14.240 N	
Commune Name	Sung Nhon		Longitude	107°35.772 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		6.50		
	Height of well collar (G.L+m)		0.10		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.65		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains 1 m from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Temperature (°C)	28.6	pH	5.00	
	Conductivity (mS/m)	6.85	Salinity(%)	0	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. This well is located next to B-6-3(market).

Table		Existing Well Survey		Date	2007 July 24
Existing well name	B-7 Dug well 2		Owner	Tran Van Binh	
Province Name	Binh Thuan		Latitude	11°15.781 N	
Commune Name	Da Kai		Longitude	107°34.003 E	
Specification of existing well	Date of installation				
	Diameter (m)		1.55		
	Depth (m)		22.00		
	Height of well collar (G.L+m)		0.89		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary deposit		
	Static groundwater level (m)		5.18		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		no depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other:				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Temperature (°C)	35.3	pH	5.06	
	Conductivity (mS/m)	9.86	Salinity(%)	0	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. This well is the dug well 15 m in depth and they drilled further 7 m in depth from the bottom of the dug well by hand-power. And the well encountered the rock at 22 m in depth.

Table		Existing Well Survey		Date	2007 June 27
Existing well name	P1 Dug Well 1		Owner	CPC & Dr. Ng Van Loi	
Province Name	Phu Yen		Latitude	13.29807 °N	
Commune Name	Xuan Phuoc		Longitude	109.06469 °E	
Specification of existing well	Date of installation		2002		
	Diameter (m)		1.00		
	Depth (m)		9.00		
	Height of well collar (G.L+m)		0.07		
	Type of pumping		Pump		
	Casing length (m)		8.93		
	Screen depth (m)		No screen		
	Geology		sand & fine gravel (weatered rock)		
	Aquifer		sand & fine gravel (weatered rock)		
	Static groundwater level (m)		4.75		
General condition of pumping volume from interviewee	Daily volume		2 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	No			
	3) Metalic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use		-----		
	3) Number of users		CPC & one household		
<i>Water quality measurement</i>	Temperature (°C)	29.7	pH	6.85	
	Conductivity (mS/m)	49.6	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		not available (concrete lid with key)		
	Water usage condition		daily		
Related feature	Geological feature		sand		
	Topographical feature		flat plain with gentle slope		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No livestock		

1. This is a deepest and water richest well.

Table		Existing Well Survey		Date	2007 June 28
Existing well name	P2 Dug Well 1		Owner	An Dinh School	
Province Name	Phu Yen		Latitude	13.31715 °N	
Commune Name	An Dinh		Longitude	109.18502 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.00		
	Depth (m)		6		
	Height of well collar (G.L.+m)		0.96		
	Type of pumping		bucket		
	Casing length (m)		5.04		
	Screen depth (m)		No screen		
	Geology		mud and sand		
	Aquifer		sand		
	Static groundwater level (m)		3.90		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		-----		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other (fluoride)				
Water usage	1) Purpose and quantity of use		Drinking and water to garden		
	2) Frequency of use		daily		
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	28.1	pH	6.81	
	Conductivity (mS/m)	53.8	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		sediment		
	Topographical feature		falt		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

Table		Existing Well Survey		Date	2007 June 29
Existing well name	P3 Dug Well 3		Owner	Tran Ngoc Quang	
Province Name	Phu Yen		Latitude	13.18991 °N	
Commune Name	An Tho		Longitude	109.23939 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.16		
	Depth (m)		4.80		
	Height of well collar (G.L.+m)		0.80		
	Type of pumping		Pump		
	Casing length (m)		4.00		
	Screen depth (m)		No screen		
	Geology		sand, gravel, rocks		
	Aquifer		rocks		
	Static groundwater level (m)		2.90		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking and daily activity		
	2) Frequency of use				
	3) Number of users		about 20 people and livestock		
<i>Water quality measurement</i>	Temperature (°C)	28.3	pH	7.09	
	Conductivity (mS/m)	63.2	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		talus deposit or weathered rock		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		Cattle and chicken		

1. The owner was not able to dig deeper, because the bottom of the well was hard weathered rock.

Table		Existing Well Survey		Date	2007 July 2
Existing well name	P4 Drilled Well 2		Owner	Pagoda	
Province Name	Phu Yen		Latitude	13.20276 °N	
Commune Name	An My		Longitude	109.27615 °E	
Specification of existing well	Date of installation		2007 April		
	Diameter (m)		0.11 (PVC)		
	Depth (m)		80.00		
	Height of well collar (G.L.+m)		0.13		
	Type of pumping		Pump		
	Casing length (m)		78		
	Screen depth (m)		2		
	Geology		sand and rock		
	Aquifer		rock		
	Static groundwater level (m)		-----		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion in this year		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking, daily activity		
	2) Frequency of use				
	3) Number of users		5 people and garden		
<i>Water quality measurement</i>	Tmeperature (°C)	28.1	pH	7.64	
	Conductivity (mS/m)	345	Salinity(%)	0.18	
Availability for water level monitoring	Well structure		Not available for water level monitoring		
	Water usage condition		daily		
Related feature	Geological feature		sand and rock		
	Topographical feature		flat (flood plain)		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. This is the deepest well in the commune.

Table		Existing Well Survey		Date	2007 July 3
Existing well name	P5 Test Drilled Well 2		Owner	Public	
Province Name	Phu Yen		Latitude	13.17017 °N	
Commune Name	Son Phuoc		Longitude	108.95650 °E	
Specification of existing well	Date of installation		No information		
	Diameter (m)		No information		
	Depth (m)		No information		
	Height of well collar (G.L+m)		No information		
	Type of pumping		No equipment for drawing up groundwater		
	Casing length (m)		No information		
	Screen depth (m)		No information		
	Geology		No information		
	Aquifer		No information		
	Static groundwater level (m)		No information		
General condition of pumping volume from interviewee	Daily volume		No information		
	Monthly volume		No information		
	Yearly volume		No information		
	Depletion period, if any		No information		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use				
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)		pH		
	Conductivity (mS/m)		Salinity(%)		
Availability for water level monitoring	Well structure				
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

Table		Existing Well Survey		Date	2007 July 4
Existing well name	P6 Dug Well 1		Owner	Thai Hong Tan	
Province Name	Phu Yen		Latitude	13.09131 °N	
Commune Name	Ea Cha Rang		Longitude	108.88815 °E	
Specification of existing well	Date of installation		2004		
	Diameter (m)		1.10		
	Depth (m)		12.40		
	Height of well collar (G.L+m)		0.70		
	Type of pumping		Pump		
	Casing length (m)		11.70		
	Screen depth (m)		No screen		
	Geology		sand and rock		
	Aquifer		sand and rock		
	Static groundwater level (m)		7.01		
General condition of pumping volume from interviewee	Daily volume		3 m ³		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use				
	3) Number of users		10 people		
<i>Water quality measurement</i>	Tmeperature (°C)	27.1	pH	7.68	
	Conductivity (mS/m)	106.2	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		sand and volcanic rock		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		bad: no prevetion against rain surface water intrusion		

1. The well is quantity richest and deepest dug well in the commune.

Table		Existing Well Survey		Date	2007 July 5
Existing well name	P7 Dug Well 1		Owner	Oi Sa (Public Well)	
Province Name	Phu Yen		Latitude	13.09665 °N	
Commune Name	Suoi Bac		Longitude	108.95118 °E	
Specification of existing well	Date of installation		2000		
	Diameter (m)		1.15		
	Depth (m)		9.40		
	Height of well collar (G.L+m)		0.93		
	Type of pumping		Pump		
	Casing length (m)		8.47		
	Screen depth (m)		No screen		
	Geology		unknown		
	Aquifer		unknown		
	Static groundwater level (m)		7.12		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	unknown			
	3) Metallic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		unknown		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	27.3	pH	7.49	
	Conductivity (mS/m)	125.7	Salinity(%)	0.06	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		unknown		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The well is quantity richest and has highest water quality.

Table		Existing Well Survey		Date	2007 July 7
Existing well name	P8 Dug Well 1		Owner	Nguyen Van Ha	
Province Name	Phu Yen		Latitude	12.99002 °N	
Commune Name	Son Thanh Dong		Longitude	109.09206 °E	
Specification of existing well	Date of installation		2000		
	Diameter (m)		1.40		
	Depth (m)		14.80		
	Height of well collar (G.L+m)		0.06		
	Type of pumping		Pump		
	Casing length (m)		14.74		
	Screen depth (m)		No screen		
	Geology		sand		
	Aquifer		sand		
	Static groundwater level (m)		13.05		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and daily activity		
	2) Frequency of use				
	3) Number of users		1 household (5 people)		
<i>Water quality measurement</i>	Tmperature (°C)	28.5	pH	7.36	
	Conductivity (mS/m)	20.3	Salinity(%)	0.01	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily		
Related feature	Geological feature		soil		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The well has high water quality.

Table		Existing Well Survey		Date	2007 June 25
Existing well name	K1 Dug Well 4 (5)		Owner	Public	
Province Name	Khanh Hoa		Latitude	12.01308°N	
Commune Name	Cam An Bac		Longitude	109.11587°E	
Specification of existing well	Date of installation		2005		
	Diameter (m)		1.13		
	Depth (m)		difficullt to measure for muddy bottom		
	Height of well collar (G.L+m)		0.70		
	Type of pumping		Bucket		
	Casing length (m)		-----		
	Screen depth (m)		No screen		
	Geology		sand & gravel		
	Aquifer		sand & gravel		
	Static groundwater level (m)		6.16		
General condition of pumping volume from interviewee	Daily volume		unknown		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		-----		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes		little	
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Washing and bath		
	2) Frequency of use				
	3) Number of users		3 households, about 15 people		
<i>Water quality measurement</i>	Tmeperature (°C)	30.1	pH	6.80	
	Conductivity (mS/m)	210	Salinity(%)	0.10	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition		Daily		
Related feature	Geological feature		sand & gravel		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage				

1. There is a muddy sediment at the well bottom.
2. There are garbage on the surface of the groundwater in the well.

Table		Existing Well Survey		Date	2007 June 26
Existing well name	K2 Dug Well 3		Owner	Dao Dinh Dung	
Province Name	Khanh Hoa		Latitude	12.02901 °N	
Commune Name	Cam Hiep Nam		Longitude	109.12687 °E	
Specification of existing well	Date of installation		1992		
	Diameter (m)		0.90		
	Depth (m)		3.82		
	Height of well collar (G.L.+m)		0.60		
	Type of pumping		Bucket		
	Casing length (m)		3.22		
	Screen depth (m)		No screen		
	Geology		sand		
	Aquifer		sand		
	Static groundwater level (m)		2.40		
General condition of pumping volume from interviewee	Daily volume		1 m ³		
	Monthly volume		-----		
	Yearly volume		-----		
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking, cooking, washing, bath		
	2) Frequency of use		daily		
	3) Number of users		one household		
<i>Water quality measurement</i>	Temperature (°C)	28.5	pH	6.04	
	Conductivity (mS/m)	39.4	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition		daily use		
Related feature	Geological feature		sediment		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The groundwater has fluoride problem.
2. The owner use a kind of filter to remve fluoride. The filter consist of coal, gravel and small rocks. They believe the filter can remove fluoride.

Table		Existing Well Survey		Date	2007 July 9
Existing well name	K3 Dug Well 4		Owner	Le Ngoc Bich	
Province Name	Khanh Hoa		Latitude	12.09942 °N	
Commune Name	Cam Hai Tay		Longitude	109.15484 °E	
Specification of existing well	Date of installation		1989		
	Diameter (m)		0.95		
	Depth (m)		4.15		
	Height of well collar (G.L+m)		0.60		
	Type of pumping		pump		
	Casing length (m)		3.55		
	Screen depth (m)		No screen		
	Geology		coarse sand		
	Aquifer		coarse sand		
	Static groundwater level (m)		1.28		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	Yes			
	3) Metallic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		washing, every day's activity		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	29.8	pH	6.57	
	Conductivity (mS/m)	141.5	Salinity(%)	0.07	
Availability for water level monitoring	Well structure		available		
	Water usage condition		daily use		
Related feature	Geological feature		sand		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		not protected		

1. In this area, three wells were drilled. The maximum depth reached 60 m, however, there were insufficient groundwater.

Table		Existing Well Survey		Date	2007 July 11
Existing well name	N-1 Dug Well 13		Owner	Nguyen Hiep	
Province Name	Ninh Thuan		Latitude	11°36.050 N	
Commune Name	Nhon Hai		Longitude	109°06.445 E	
Specification of existing well	Date of installation				
	Diameter (m)		7.00		
	Depth (m)		6.20		
	Height of well collar (G.L+m)		the top of well is under 1 m from the ground		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		5.10		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	31.1	pH	8.73	
	Conductivity (mS/m)	56.6	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		2 km from the sea coast		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table Existing Well Survey		Date 2007 July 12	
Existing well name	N-2 Dug Well 2	Owner	Huu Hieu Trach
Province Name	Ninh Thuan	Latitude	11°48.099 N
Commune Name	Cong Hai	Longitude	109°06.100 E
Specification of existing well	Date of installation		
	Diameter (m)	1.00	
	Depth (m)	6.38	
	Height of well collar (G.L+m)	0.65	
	Type of pumping	pump	
	Casing length (m)		
	Screen depth (m)		
	Geology		
	Aquifer		
	Static groundwater level (m)	3.46	
General condition of pumping volume from interviewee	Daily volume	much water	
	Monthly volume		
	Yearly volume		
	Depletion period, if any	no depletion	
General condition of water quality from interviewee	1) Water borne disease	No	kind
	2) Salinization	No	
	3) Metalic taste	Yes	kind weak
	4) the other		
Water usage	1) Purpose and quantity of use	drinking	
	2) Frequency of use		
	3) Number of users		
<i>Water quality measurement</i>	Tmeperature (°C)	30.7	pH 6.99
	Conductivity (mS/m)	102.4	Salinity(%) 0.05
Availability for water level monitoring	Well structure	no problem	
	Water usage condition		
Related feature	Geological feature		
	Topographical feature	low land	
Sanitary condition	Positional relationship between livestock, toilet and drainage	no problem	

Table		Existing Well Survey		Date	2007 July 10
Existing well name	N-3 Dug Well 5		Owner	Mang Dung	
Province Name	Ninh Thuan		Latitude	11°39.373 N	
Commune Name	Bac Son		Longitude	109°06.025 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		7.75		
	Height of well collar (G.L+m)		0.56		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		4.50		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains 1.5 m from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	30.5	pH	7.20	
	Conductivity (mS/m)	56.7	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		small basin		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. The public water supply system is already provided in Xom Bang village but of shortage in dry season.
2. In this village, they use the public water supply system and dug wells.

Table		Existing Well Survey		Date	2007 July 6
Existing well name	N-4 Dug Well 5		Owner	Trinh Van Nuo (Restaurant)	
Province Name	Ninh Thuan		Latitude	11°24.092 N	
Commune Name	Phouc Minh		Longitude	108°53.666 E	
Specification of existing well	Date of installation				
	Diameter (m)		2.23		
	Depth (m)		4.90		
	Height of well collar (G.L+m)		0.27		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		0.98		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		no depletion, even in dry season they get much water		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other : dirty				
Water usage	1) Purpose and quantity of use		drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	29.9	pH	6.75	
	Conductivity (mS/m)	95.6	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		in salt fields		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. The householder is selling the water of this well for drinking water.

Table		Existing Well Survey		Date	2007 July 9
Existing well name	N-5 Dug Well 7		Owner	Nguyen Hoang Nhat	
Province Name	Ninh Thuan		Latitude	11°31.393 N	
Commune Name	Phouc Hai		Longitude	108°57.786 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.72		
	Depth (m)		3.49		
	Height of well collar (G.L+m)		0.29		
	Type of pumping		bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		2.44		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any				
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes	strong		
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Not drinking		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Temperature (°C)	30.5	pH	7.37	
	Conductivity (mS/m)	401	Salinity(%)	0.21	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		on the sand hill		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. This well is located in Tu tam 1 village.

Table		Existing Well Survey		Date	2007 July 5
Existing well name	N-6 Dug Well 1		Owner	Cultural house in Tu Thien	
Province Name	Ninh Thuan		Latitude	11°28.032 N	
Commune Name	Phuoc Dinh		Longitude	109°00.617 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)				
	Height of well collar (G.L+m)		0.63		
	Type of pumping				
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer				
	Static groundwater level (m)		4.55		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains a little from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	unknown	kind		
	2) Salinization	unknown			
	3) Metalic taste	unknown	kind		
	4) the other				
Water usage	1) Purpose and quantity of use				
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	29.4	pH	8.47	
	Conductivity (mS/m)	105.1	Salinity(%)	0.05	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 July 3
Existing well name	B-1 Dug Well 1		Owner	Tran Tiem	
Province Name	Binh Thuan		Latitude	10°58.362 N	
Commune Name	Muong Man		Longitude	108°00.394 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		10.00		
	Height of well collar (G.L+m)		0.20		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		4.10		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		in dry season ,dry up		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	Yes			
	3) Metalic taste	Yes	kind		
	4) the other : light yellow color				
Water usage	1) Purpose and quantity of use		Not drinking		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	27.4	pH	7.44	
	Conductivity (mS/m)	255	Salinity(%)	0.13	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1.They say that 7~8 wells around this area have salinization.

Table		Existing Well Survey		Date	2007 July 2
Existing well name	B-2 Dug Well 4		Owner	Nguyen Van Quyet	
Province Name	Binh Thuan		Latitude	11°03.176 N	
Commune Name	Gia Huynh		Longitude	107°36.916 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.90		
	Depth (m)		5.00		
	Height of well collar (G.L+m)		1.73		
	Type of pumping				
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		1.35		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	Yes	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking and others		
	2) Frequency of use				
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	28.0	pH	6.57	
	Conductivity (mS/m)	35.7	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature		sedimentary		
	Topographical feature		low land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The water of this dug well remains 2m above the bottom in dry season.

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-3 Dug Well 2		Owner	Nguyen Thi Kiem	
Province Name	Binh Thuan		Latitude	11°13.871 N	
Commune Name	Nghì Duc		Longitude	107°39.853 E	
Specification of existing well	Date of installation				
	Diameter (m)		1.00		
	Depth (m)		6.37		
	Height of well collar (G.L+m)		0.68		
	Type of pumping		pump & bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.11		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		in dry season, water remains very little from the bottom		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	28.5	pH	5.10	
	Conductivity (mS/m)	8.41	Salinity(%)	0	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

Table		Existing Well Survey		Date	2007 June 29
Existing well name	B-4 Dr-3		Owner	Nguyen Chung	
Province Name	Binh Thuan		Latitude	10°50.039 N	
Commune Name	Tan Duc		Longitude	107°34.886 E	
Specification of existing well	Date of installation				
	Diameter (m)				
	Depth (m)		25.00		
	Height of well collar (G.L+m)				
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology		granite		
	Aquifer		weathered granite		
	Static groundwater level (m)				
General condition of pumping volume from interviewee	Daily volume		much water		
	Monthly volume				
	Yearly volume				
	Depletion period, if any		No depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metalic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		Drinking and others		
	2) Frequency of use		contineous pumping from 7.00 to 21:00		
	3) Number of users				
<i>Water quality measurement</i>	Tmeperature (°C)	28.1	pH	6.74	
	Conductivity (mS/m)	55.3	Salinity(%)	0.03	
Availability for water level monitoring	Well structure		Not available		
	Water usage condition				
Related feature	Geological feature		granite		
	Topographical feature		on the top of rolling hills		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-5 Dug Well 4		Owner	Le Phuong Tinh	
Province Name	Binh Thuan		Latitude	11°14.205 N	
Commune Name	Me Pu		Longitude	107°36.926 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		6.00		
	Height of well collar (G.L+m)		0.66		
	Type of pumping		pump & bucket		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.12		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains a little from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	Yes	kind	only in dry season	
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Temperature (°C)	28.6	pH	4.28	
	Conductivity (mS/m)	36.6	Salinity(%)	0.02	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature		sedimentary		
	Topographical feature		Flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		apart from about 5 m from the pig-cote		

1. This well is located next to the market.

Table		Existing Well Survey		Date	2007 July 25
Existing well name	B-6 Dug Well 4		Owner	Nguyen Van Hung	
Province Name	Binh Thuan		Latitude	11°14.240 N	
Commune Name	Sung Nhon		Longitude	107°35.772 E	
Specification of existing well	Date of installation				
	Diameter (m)		0.80		
	Depth (m)		6.50		
	Height of well collar (G.L+m)		0.10		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary		
	Static groundwater level (m)		2.65		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		In dry season, water remains 1 m from the bottom.		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	28.6	pH	5.00	
	Conductivity (mS/m)	6.85	Salinity(%)	0	
Availability for water level monitoring	Well structure		no problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature		flat land		
Sanitary condition	Positional relationship between livestock, toilet and drainage		no problem		

1. This well is located next to B-6-3(market).

Table		Existing Well Survey		Date	2007 July 24
Existing well name	B-7 Dug well 2		Owner	Tran Van Binh	
Province Name	Binh Thuan		Latitude	11°15.781 N	
Commune Name	Da Kai		Longitude	107°34.003 E	
Specification of existing well	Date of installation				
	Diameter (m)		1.55		
	Depth (m)		22.00		
	Height of well collar (G.L+m)		0.89		
	Type of pumping		pump		
	Casing length (m)				
	Screen depth (m)				
	Geology				
	Aquifer		sedimentary deposit		
	Static groundwater level (m)		5.18		
General condition of pumping volume from interviewee	Daily volume				
	Monthly volume				
	Yearly volume				
	Depletion period, if any		no depletion		
General condition of water quality from interviewee	1) Water borne disease	No	kind		
	2) Salinization	No			
	3) Metallic taste	No	kind		
	4) the other:				
Water usage	1) Purpose and quantity of use		drinking & others		
	2) Frequency of use				
	3) Number of users		1 household		
<i>Water quality measurement</i>	Tmeperature (°C)	35.3	pH	5.06	
	Conductivity (mS/m)	9.86	Salinity(%)	0	
Availability for water level monitoring	Well structure		No problem		
	Water usage condition				
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. This well is the dug well 15 m in depth and they drilled further 7 m in depth from the bottom of the dug well by hand-power. And the well encountered the rock at 22 m in depth.

Table		Surface Water Survey		Date:	2007 July 2
Surface water name	P2 Stream		Surveyer	Ichiro TANAKA	
Province Name	Phu Yen		Latitude	13.31055 °N	
Commune Name	An Dinh		Longitude	109.19468 °E	
	<i>Height of water surface (level)</i>			<i>E.L + m</i>	
Kind of surface water	Spring				
General condition of water discharge/volume by interview	Flow Discharge:		unknown		
	Water volume (capacity):		unknown		
	Seasonal change of flow discharge/water volume		unknown		
General condition of water quality by interview	1) Water borne disease		unknown	kind:	
	2) Salinization		unknown		
	3) Metallic taste		unknown	kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	26.9	<i>pH</i>	7.29
	<i>Conductivity</i>	(mS/m)	26.4	<i>Salinity (%)</i>	0.01
Surface water usage	1) Purpose of use		irrigation		
	Quantity of use		unknown		
	2) Frequency of use		unknown		
	3) Number of users		all villages		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature		sandy bed		
	Topographical feature		flood plain in valley		
Sanitary condition	Positional relationship between livestock, toilet and drainage		cattles		

Table		Surface Water Survey		Date:	2007 July 2
Surface water name	P4 Swamp		Surveyer	Ichiro TANAKA	
Province Name	Phu Yen		Latitude	°N	
Commune Name	An My		Longitude	°E	
	<i>Height of water surface (level)</i>		<i>E.L + m</i>		
Kind of surface water	Swamp (which appears in rainy season)				
General condition of water discharge/volume by interview	Flow Discharge:		unknown		
	Water volume (capacity):		unknown		
	Seasonal change of flow discharge/water volume		unknown		
General condition of water quality by interview	1) Water borne disease		unknown	kind:	
	2) Salinization		No		
	3) Metallic taste		unknown	kind:	
	4) the other				
Water quality measurement	<i>Tmperature</i>	(°C)	-----	<i>pH</i>	-----
	<i>Conductivity</i>	(S/m)	-----	<i>Salinity (%)</i>	-----
Surface water usage	1) Purpose of use		irrigation		
	Quantity of use				
	2) Frequency of use				
	3) Number of users				
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature		sedimentary deposit		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		-----		

1. This swamp is located at the end of flood plain surrounded by sand bar and small mountains. There is no way of drainage of rain water and waters Therefore, the big swamp emarge in rainy season. The swamp area is used for rice production field.

Table		Surface Water Survey		Date:	2007 July 4
Surface water name	P6 Spring		Surveyer	Ichiro TANAKA	
Province Name	Phu Yen		Latitude	13.09890 °N	
Commune Name	Ea Cha Rang		Longitude	108.88991 °E	
	<i>Height of water surface (level)</i>		<i>E.L + m</i>		
Kind of surface water	Spring				
General condition of water discharge/volume by interview	Flow Discharge:		little		
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume				
General condition of water quality by interview	1) Water borne disease		unkown	kind:	
	2) Salinization		no		
	3) Metallic taste		unkown	kind:	
	4) the other				
Water quality measurement	<i>Tmeperature</i>	(°C)	27.0	<i>pH</i>	5.61
	<i>Conductivity</i>	(S/m)	8.52	<i>Salinity (%)</i>	0
Surface water usage	1) Purpose of use		Drinking only		
	Quantity of use				
	2) Frequency of use				
	3) Number of users		150 households (600 – 700 people)		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature		weathered volcanic rock and marble		
	Topographical feature		slope		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No problem		

1. The spring flows out on the boundary between rock and soil.
2. People come to the spring with plastic bottles to storage water for their drinking water.
3. The other spring is very far (about 15 km) and in the mountainous area. So only livestocks use the water.

Table		Surface Water Survey		Date:	2007 July 5
Surface water name	P7 Pond			Surveyer	Ichiro TANAKA
Province Name	Phu Yen			Latitude	13.09322 °N
Commune Name	Suoi Bac			Longitude	108.96688 °E
	<i>Height of water surface (level)</i>				<i>E.L + m</i>
Kind of surface water	reservoir				
General condition of water discharge/volume by interview	Flow Discharge:			unknown	
	Water volume (capacity):			unknown	
	Seasonal change of flow discharge/water volume			unknown	
General condition of water quality by interview	1) Water borne disease			unknown	kind:
	2) Salinization			unknown	
	3) Metallic taste			unknown	kind:
	4) the other				
Water quality measurement	<i>Tmperature</i>	(°C)	28.7	<i>pH</i>	7.57
	<i>Conductivity</i>	(mS/m)	21.4	<i>Salinity (%)</i>	0.01
Surface water usage	1) Purpose of use		irrigation		
	Quantity of use				
	2) Frequency of use				
	3) Number of users				
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>				(m)
Related feature	Geological feature		volcanic rock and coarse deposit		
	Topographical feature		gentle slope		
Sanitary condition	Positional relationship between livestock, toilet and drainage		feeding livestocks on the bank		

1. This is a big reservoir for irrigation.

Table		Surface Water Survey		Date:	2007 July 7
Surface water name	P8 River (Song Da Rang)			Surveyer	Ichiro TANAKA
Province Name	Phu Yen			Latitude	13.02855 °N
Commune Name	Son Thanh Dong			Longitude	109.10407 °E
	<i>Height of water surface (level)</i>			<i>E.L + m</i>	7
Kind of surface water	River				
General condition of water discharge/volume by interview	Flow Discharge:			unknown	
	Water volume (capacity):			unknown	
	Seasonal change of flow discharge/water volume			unknown	
General condition of water quality by interview	1) Water borne disease			unknown	kind:
	2) Salinization			unknown	
	3) Metallic taste			unknown	kind:
	4) the other				
Water quality measurement	<i>Temperature</i>	(°C)	29.2	<i>pH</i>	8.04
	<i>Conductivity</i>	(S/m)	10.76	<i>Salinity (%)</i>	0.01
Surface water usage	1) Purpose of use		irrigation		
	Quantity of use		unknown		
	2) Frequency of use		unknown		
	3) Number of users		unknown		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>				(m)
Related feature	Geological feature		flood plain		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage				

1. The other river has dried up so far.

Table		Surface Water Survey		Date:	2007 June 25
Surface water name	K1 Spring		Surveyer	Ichiro TANAKA	
Province Name	Khanh Hoa		Latitude	12.01077 °N	
Commune Name	Cam An Bac		Longitude	109.07878 °E	
	<i>Height of water surface (level)</i>		<i>E.L + m</i>	109	
Kind of surface water	Spring				
General condition of water discharge/volume by interview	Flow Discharge:		No water during dry season		
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume				
General condition of water quality by interview	1) Water borne disease		No.	kind:	
	2) Salinization		No.		
	3) Metallic taste		No.	kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Temperature</i>	(°C)	-----	<i>pH</i>	-----
	<i>Conductivity</i>	(mS/m)	-----	<i>Salinity</i>	(%) -----
Surface water usage	1) Purpose of use		Irrigation and plantation		
	Quantity of use		unknown		
	2) Frequency of use		unknown		
	3) Number of users		unknown		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature		talus deposit		
	Topographical feature		gentle slope		
Sanitary condition	Positional relationship between livestock, toilet and drainage		No protection		

The spring flows out of the discharge point in the talus deposit so that the spring water has high turbidity.

Table		Surface Water Survey		Date:	2007 June 26
Surface water name	K2 Vin Thai Stream		Surveyer	Ichiro TANAKA	
Province Name	Khanh Hoa		Latitude	12.02252 °N	
Commune Name	Cam Hiep Nam		Longitude	109.12790 °E	
	<i>Height of water surface (level)</i>		<i>E.L + m</i>	25	
Kind of surface water	Spring				
General condition of water discharge/volume by interview	Flow Discharge:		unknown (9m wide, 0.01m depth)		
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume		The stream water dry up in dry season.		
General condition of water quality by interview	1) Water borne disease		unknown	kind:	
	2) Salinization		No		
	3) Metallic taste		No	kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	29.4	<i>pH</i>	7.88
	<i>Conductivity</i>	(S/m)	35.2	<i>Salinity (%)</i>	0.02
Surface water usage	1) Purpose of use		irrigation		
	Quantity of use		unknown		
	2) Frequency of use		unknown		
	3) Number of users		unknown		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature		sandy bed		
	Topographical feature		flat		
Sanitary condition	Positional relationship between livestock, toilet and drainage		The villagers wash their cattles.		

Table		Surface Water Survey		Date:	2007 July 12
Surface water name	N-2-2	Surveyer	K.Hirayama		
Province Name	Ninh Thuan	Latitude	10°N 46.722		
Commune Name	Cong Hai	Longitude	109°E 04.502		
	<i>Height of water surface (level)</i>		<i>E.L + m</i>		
Kind of surface water	River				
General condition of water discharge/volume by interview	Flow Discharge:				
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume				
General condition of water quality by interview	1) Water borne disease			kind:	
	2) Salinization				
	3) Metallic taste			kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	29.8	<i>pH</i>	7.46
	<i>Conductivity</i>	(S/m)	0.136	<i>Salinity (%)</i>	0.01
Surface water usage	1) Purpose of use		Drinking		
	Quantity of use				
	2) Frequency of use				
	3) Number of users		Suoi Vang hamlet's people		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

Table		Surface Water Survey		Date:	2007 July 9
Surface water name	N-5-1		Surveyer	K.Hirayama	
Province Name	Ninh Thuan		Latitude	11°N 30.053	
Commune Name	Phuoc Hai		Longitude	108°E 57.633	
	<i>Height of water surface (level)</i>			<i>E.L + m</i>	
Kind of surface water	Stream (originally from springs on the foot of th sand dune)				
General condition of water discharge/volume by interview	Flow Discharge:				
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume				
General condition of water quality by interview	1) Water borne disease			kind:	
	2) Salinization		No		
	3) Metallic taste		No	kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	29.6	<i>pH</i>	6.84
	<i>Conductivity</i>	(S/m)	0.0436	<i>Salinity (%)</i>	0.02
Surface water usage	1) Purpose of use		Drinking		
	Quantity of use				
	2) Frequency of use				
	3) Number of users		Hoa Thuy hamlet's people		
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

Table		Surface Water Survey		Date:	2007 July 5
Surface water name	N-6-1		Surveyer	K.Hirayama	
Province Name	Ninh Thuan		Latitude	11°N 23.639	
Commune Name	Phuoc Dinh		Longitude	108°E 58.719	
	<i>Height of water surface (level)</i>			<i>E.L + m</i>	
Kind of surface water	River				
General condition of water discharge/volume by interview	Flow Discharge:				
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume		In dry season , dry up		
General condition of water quality by interview	1) Water borne disease			kind:	
	2) Salinization				
	3) Metallic taste			kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	32.6	<i>pH</i>	8.08
	<i>Conductivity</i>	(S/m)	0.202	<i>Salinity (%)</i>	0.10
Surface water usage	1) Purpose of use				
	Quantity of use				
	2) Frequency of use				
	3) Number of users				
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

Table		Surface Water Survey		Date:	2007 July 23
Surface water name	B-7-1 (Suoi Cau Be)		Surveyer	K.Hirayama	
Province Name	Binh Thuan		Latitude	11°N 15.959	
Commune Name	Da Kai		Longitude	107°E 31.381	
	<i>Height of water surface (level)</i>			<i>E.L + m</i>	
Kind of surface water	River				
General condition of water discharge/volume by interview	Flow Discharge:				
	Water volume (capacity):				
	Seasonal change of flow discharge/water volume		In driest season , dry up		
General condition of water quality by interview	1) Water borne disease			kind:	
	2) Salinization				
	3) Metallic taste			kind:	
	4) the other (Fluoride ?)				
Water quality measurement	<i>Tmperature</i>	(°C)	27.3	<i>pH</i>	7.31
	<i>Conductivity</i>	(S/m)	0.0129	<i>Salinity (%)</i>	0.01
Surface water usage	1) Purpose of use				
	Quantity of use				
	2) Frequency of use				
	3) Number of users				
Possibility of water resource	<i>Relative height between the targeted commune and the surface water</i>			(m)	
Related feature	Geological feature				
	Topographical feature				
Sanitary condition	Positional relationship between livestock, toilet and drainage				

DATA 6

GEOPHYSICAL SURVEY

DATA (GEOPHYSICAL SURVEY (

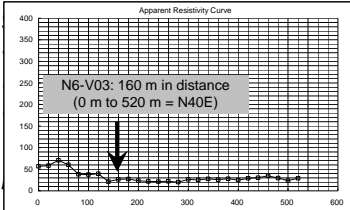
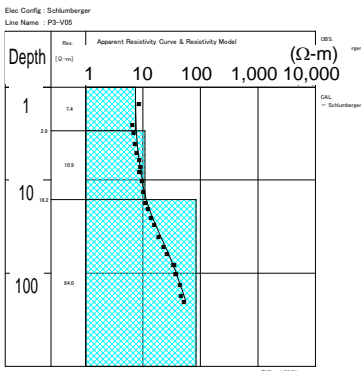
(.1 Results of the VES and the HEP in each Commune

[Legend of the Sheet to Summarize the Results]

Page-1

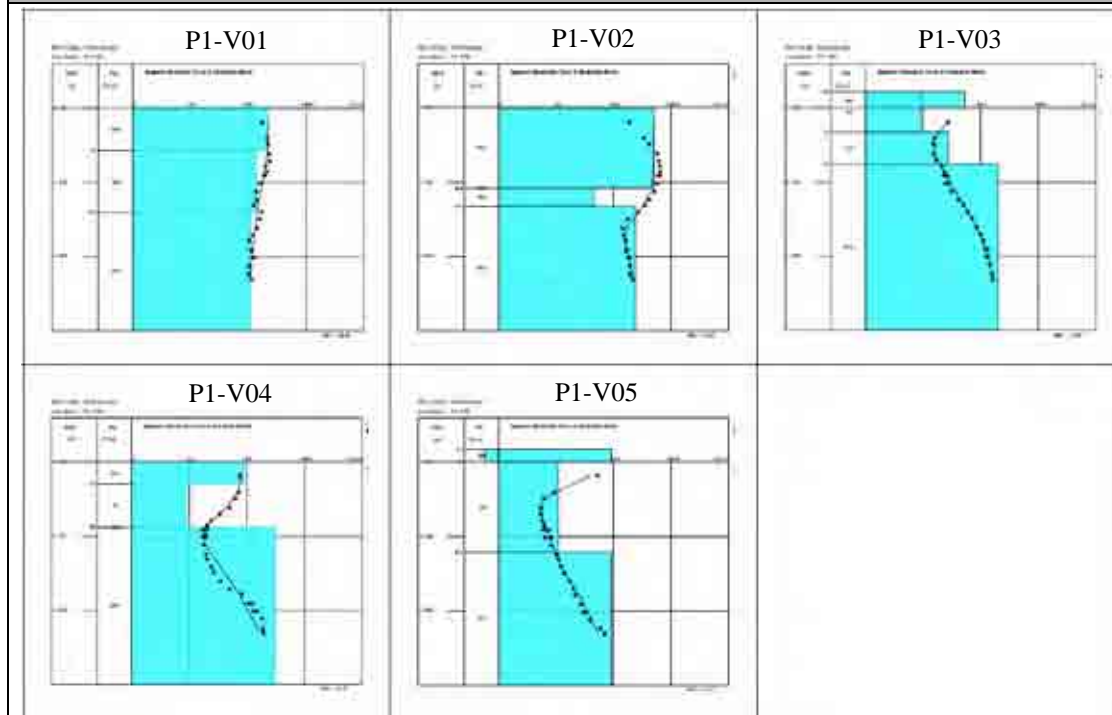
Province	Name of province	Commune	Commune ID and name	1/2
Survey Points on Geology Map generated by JICA Study Team				
Geophysical survey (the VES and the HEP) points are overlaid on geology map generated by JICA Study Team in this study and satellite image as a background.				
Enlargement of Location of the Survey Points				
Scale of the above map is relatively large to see geological conditions in whole commune. Area of the survey points is enlarged to clarify.				

Page-2

Province	Name of province	Commune	Commune ID and name	2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point		
<p>Result of the HEP is shown by</p>  <p>Vertical axis shows apparent resistivity. Horizontal axis shows survey positions.</p>		Name of Survey Points		Name of Survey Points
		Name of Survey Points		Name of Survey Points
<p>Surface Geology: To pick type of surface geology at the survey points up from the geology map generated by JICA Study Team.</p> <p>Bedrock: To estimate type of bedrock beneath subsurface soil based on surrounding geology distribution if it is available.</p> <p>Geology Layer: To correspond the above mentioned type of bedrock with name of geology layer described in existing geology map.</p> <ul style="list-style-type: none"> ■ Be: Bengian-Queson Complex ■ Va: Vancanh Complex ■ Ba: Bandon Formation ■ An: Ankroet-Dinhquan Complex ■ De: Deoca Complex ■ Pl: Pliocene to Pleistocene Basalts 				
Results of the VES				
<p>Result of the VES is shown by graph that consist of apparent resistivity plot, fitting curve and resistivity model derived from an analysis.</p> <p>Vertical and horizontal axis of every graph is applied same as shown in right-hand graph.</p> <p>[Features of Apparent Resistivity] Feature of apparent resistivity with being grouping is described/summarized.</p> <p>[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model] Depth of top of the bedrock, weathering/fracture section and seawater intrusion possibility is summarized. Some comments of boring core also are described with underline.</p>				
				

Province	Phu Yen	Commune	P-1: Xuan Phuoc			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P1-V01	Qg (Tg1) /Va	P1-V02	Q (Tg1) /Va	P1-V03	Qg (Tg1) /Va
	P1-V04	Qg (Tg1) /Va	P1-V05	Qg (Tg1) /Va		

Results of the VES



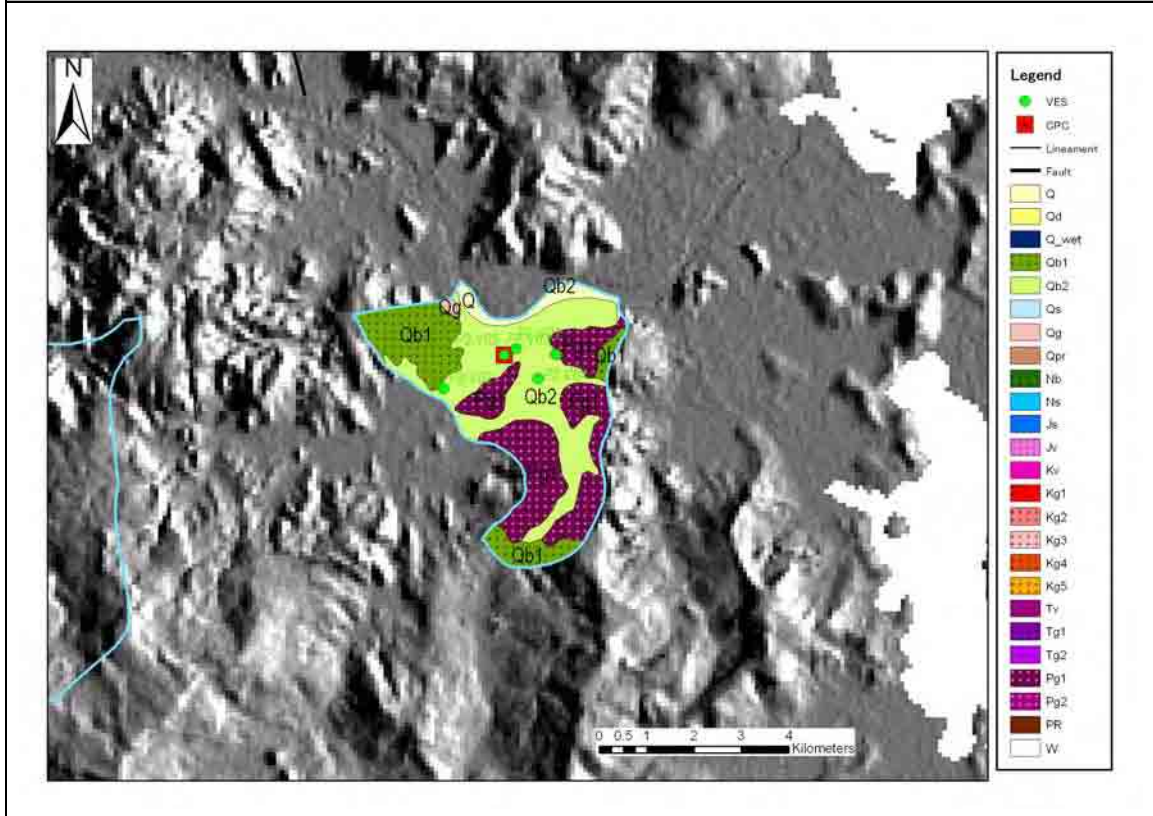
[Features of Apparent Resistivity]

- V01: Apparent resistivity becomes low value following the deeper part of strata.
- V02: Apparent resistivity around 10 m and 30 m in depth shows the maximum and the minimum value, respectively. The fitting curve shows inverse-S shape.
- V03, V04, V05: Apparent resistivity from ground surface to around 10 m in depth and the below becomes low value and high value following the deeper part of strata, respectively. V05 generally shows low value of apparent resistivity.

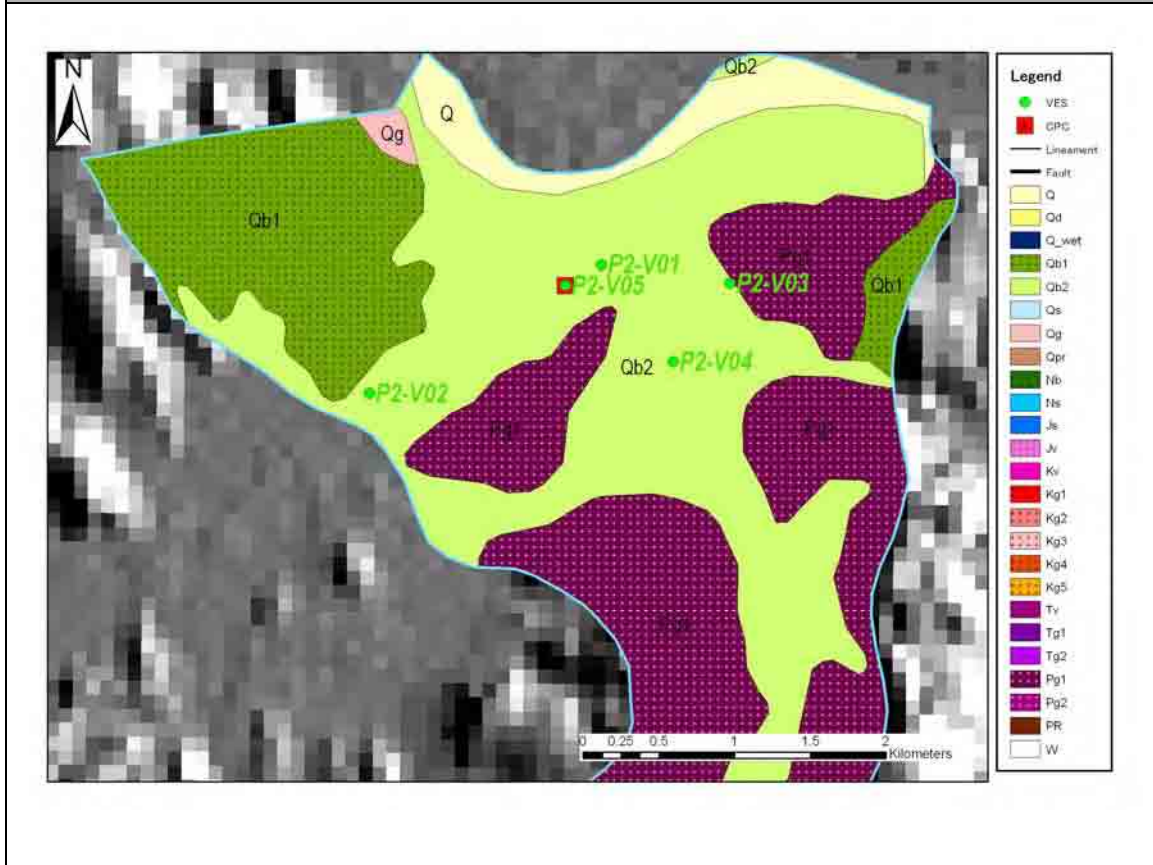
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite with fracture may appear at shallower than 10 m in depth and continue by 100 m in depth. The boring core shows that granite with fracture appeared from 20 m to 50 m in depth.
- V02: Granite and its fracture sections may appear from near the ground surface and from around 10 m to 20 m in depth, respectively.
- V03, V04: Granite may appear at shallower than 10 m in depth.
- V05: Granite may appear from around 10 m to 20 m in depth.

Survey Points on Geology Map generated by JICA Study Team

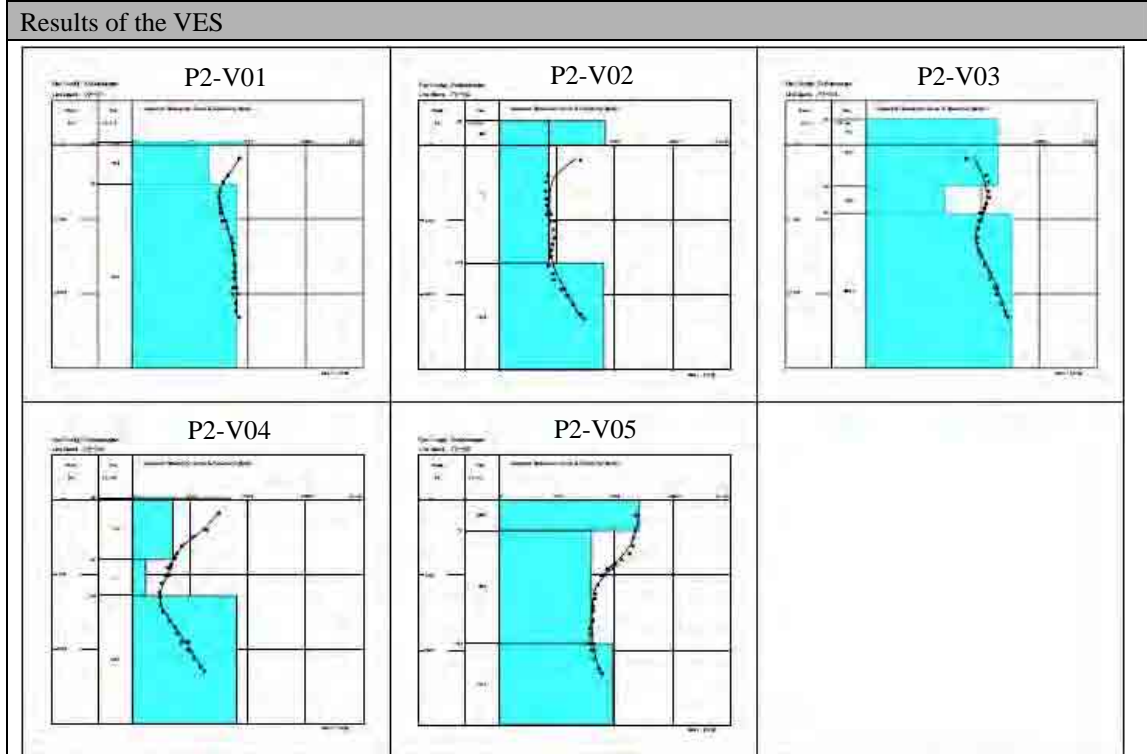


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-2: An Dinh	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P2-V01	Qb2 (Pg1) /Be	P2-V02	Qb2 (Pg1) /Be	P2-V03	Pg1 /Be
	P2-V04	Qb2 (Pg1) /Be	P2-V05	Qb2 (Pg1) /Be		



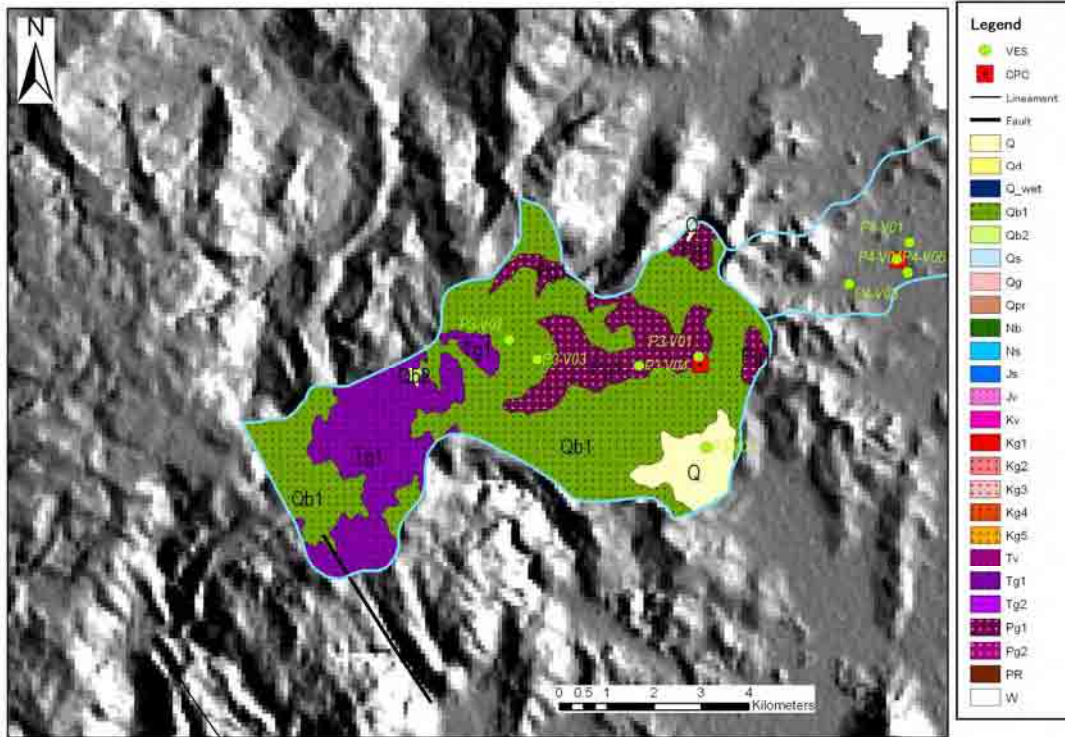
[Features of Apparent Resistivity]

- V01: Apparent resistivity change with depth is less and its value generally shows low.
- V02: Apparent resistivity by 40 m in depth and below it shows less change and becomes high value following the deeper part of strata. Its value generally shows low.
- V03: Apparent resistivity around 20 m in depth shows the minimum value. The fitting curve shows inverse-S shape. Its value shows relatively high.
- V04: Apparent resistivity from ground surface to around 20 m in depth and the below becomes low value and high value following the deeper part of strata, respectively. Its value generally shows low.
- V05: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value and less change. Its value generally shows low.

[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at shallower than 10 m in depth. There is concern about seawater intrusion. The boring core shows that granite with fracture appeared from 30 m to 45 m in depth.
- V02: Granite may appear at around 40 m in depth. There is concern about seawater intrusion.
- V03: Granite may appear at around 10 m in depth.
- V04: Granite may appear at around 20 m in depth. There is concern about seawater intrusion.
- V05: Granite may appear from near the ground surface. There is concern about seawater intrusion.

Survey Points on Geology Map generated by JICA Study Team

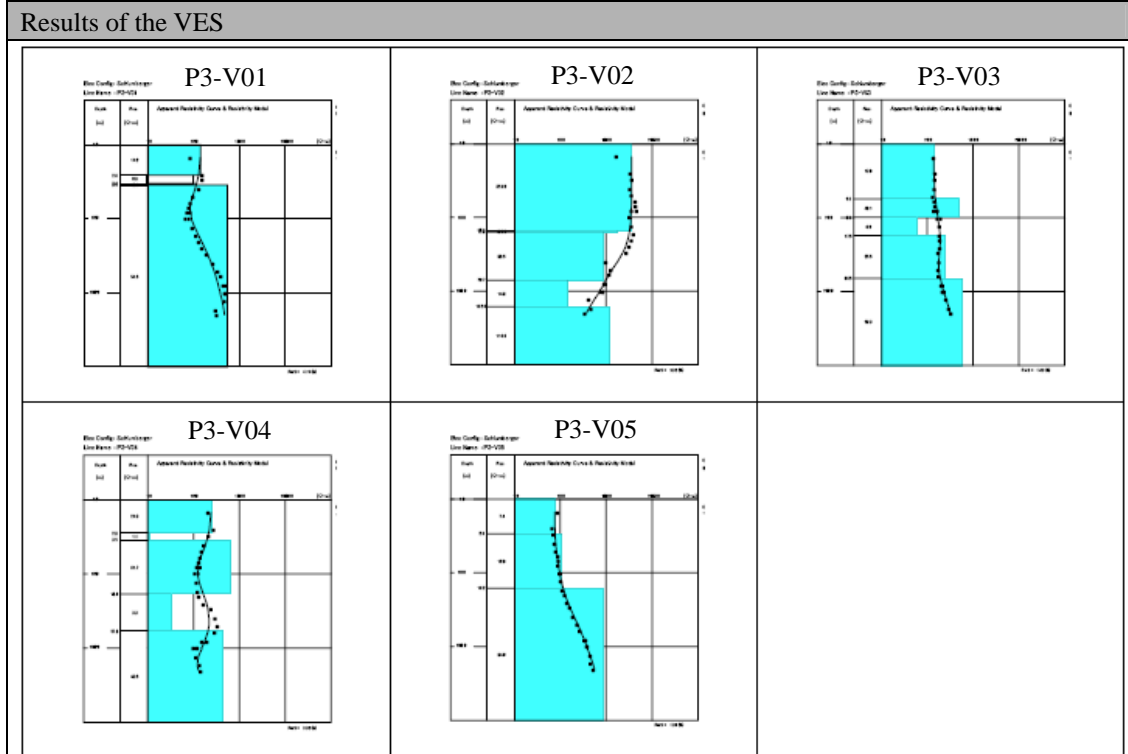


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-3: An Tho	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P3-V01	Qb1 /Pl	P3-V02	Qb1 /Be + Pl	P3-V03	Qb1 /Pl
	P3-V04	Qb1 /Pl	P3-V05	Qb1 /Pl		



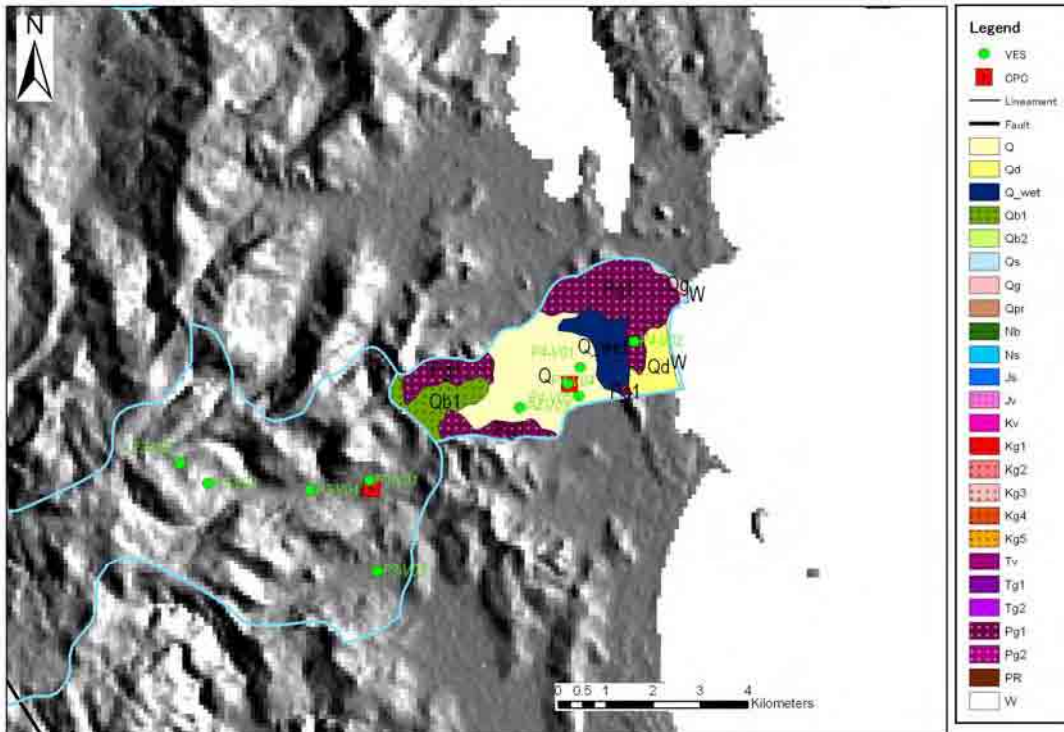
[Features of Apparent Resistivity]

- V01: Apparent resistivity around 10 m in depth, by 100 m in depth and the below shows the minimum value, becomes high value following the deeper part of strata and low value, respectively. Its value generally shows low.
- V02: Apparent resistivity by 20 m in depth and the below shows less change and becomes low value, respectively.
- V03: Apparent resistivity change with depth is less and its value generally shows low.
- V04: Apparent resistivity from 10 m to 50 m in depth and the below becomes high value and low value following the deeper part of strata, respectively. Its value generally shows low.
- V05: Apparent resistivity becomes high value following the deeper depth of strata. Its value generally shows low.

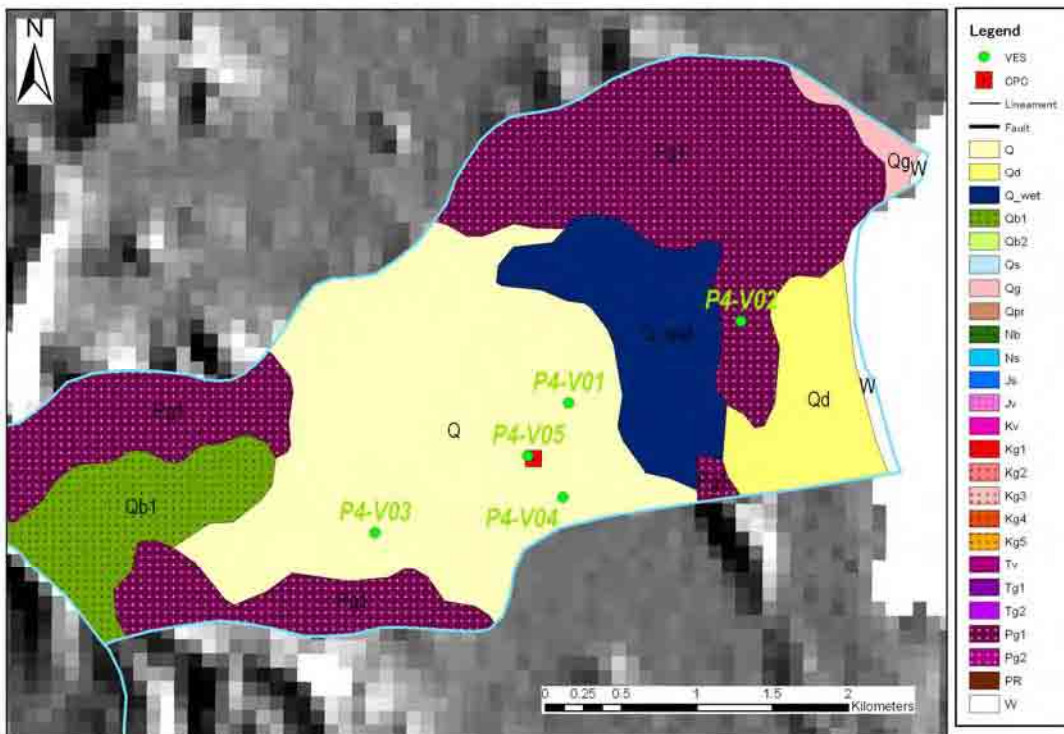
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Basalt may appear at shallower than 10 m in depth. The boring core shows that basalt appeared from 3.5m in depth, and sedimentary rock (siltstone / claystone) appeared from 36 m to 41 m in depth and 62 m to 100 m in depths.
- V02: Granite may appear from near the ground surface. Basalt and its fracture/joint section may appear from around 10 m to 20 m in depth and below around 70 m in depth, respectively.
- V03: Basalt and its fracture / joint section may appear at shallower than 10 m in depth and from around 10 m to 70 m in depth, respectively.
- V04: Basalt and its fracture / joint section may appear at shallower than 10 m in depth and from around 20 m to 60 m in depth, respectively.
- V05: Basalt may appear from around 10 m to 20 m in depth.

Survey Points on Geology Map generated by JICA Study Team



Enlargement of Location of the Survey Points

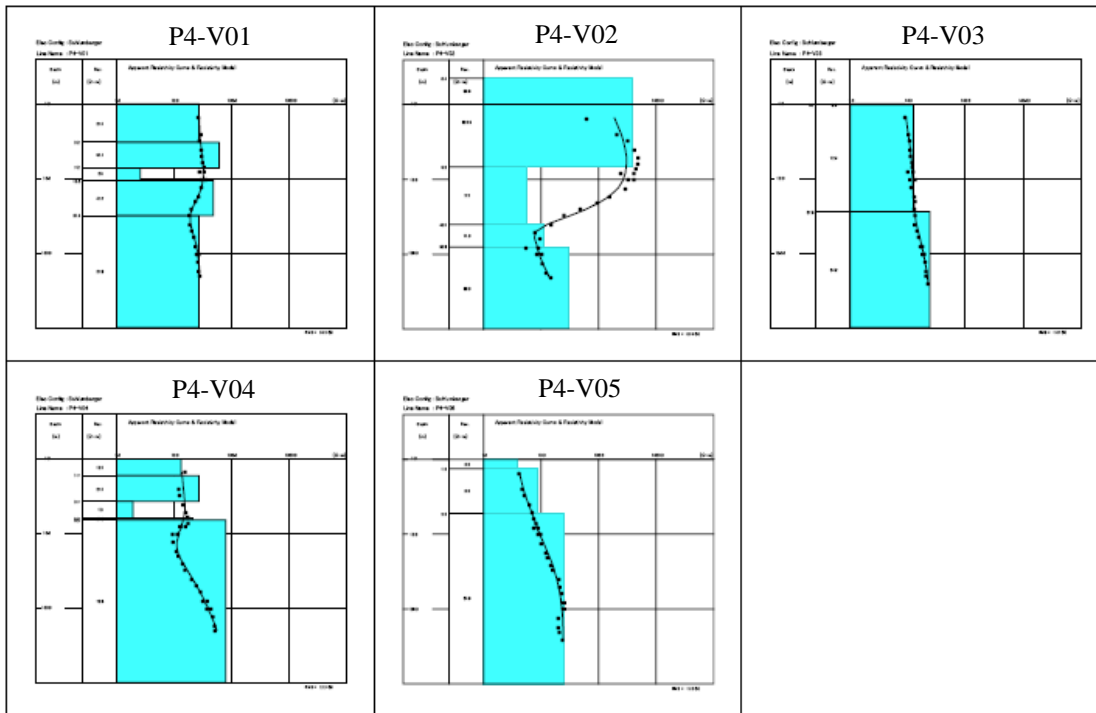


Province	Phu Yen	Commune	P-4: An My	2/2
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Results of the HEP	Surface Geology (Bedrock)/Geology Layer at the VES Point					
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None	P4-V01	Q /Pl	P4-V02	Pg1 /Be + Pl	P4-V03	Q /Pl
	P4-V04	Q /Pl	P4-V05	Q /Pl		

Results of the VES



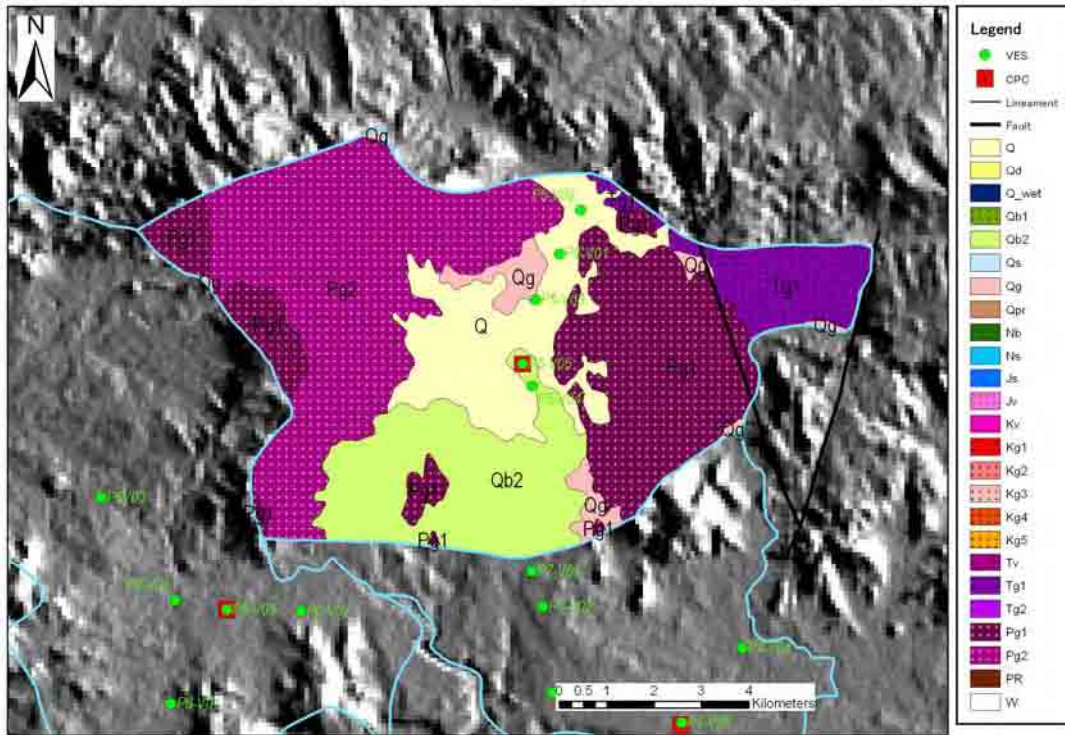
[Features of Apparent Resistivity]

- V01: Apparent resistivity change with depth is less and the fitting curve shows inverse-S shape. Its value generally shows low.
- V02: Apparent resistivity by 6 m and the below shows relatively high value and becomes low value following the deeper depth of strata, respectively.
- V03: Apparent resistivity becomes slightly high value following the deeper depth of strata. Its value generally shows low.
- V04: Apparent resistivity below 10 m in depth becomes high value following the deeper depth of strata. Its value generally shows low.
- V05: Apparent resistivity by 100 m in depth and the below becomes high value following the deeper depth of strata and shows less change, respectively.

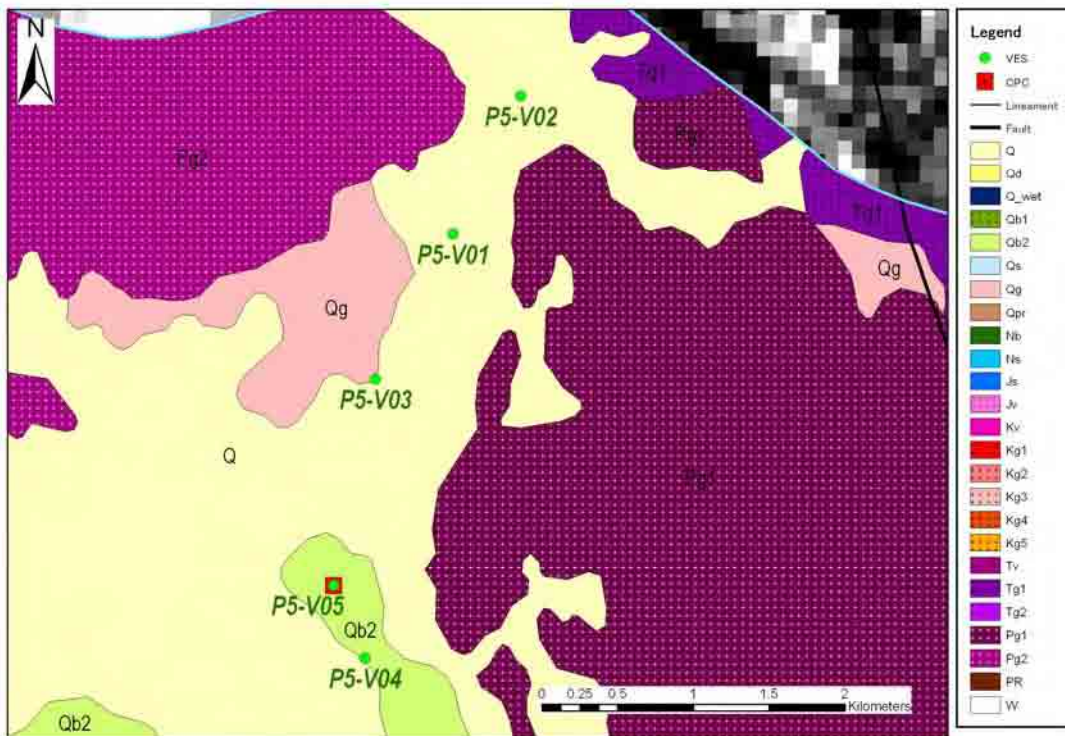
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Basalt and its fracture / joint section may appear from near the ground surface and around 10 m in depth with a few meters in thickness, respectively. There is concern about seawater intrusion.
- V02: Granite and basalt with fracture / joint may appear from near the ground surface and from around 10 m to 80 m in depth, respectively. There is concern about seawater intrusion.
- V03: Basalt with fracture may appear from near the ground surface. The boring core shows that basalt with weathering / fracture and sedimentary rock (siltstone / claystone / sandstone) appeared from 8 m in depth and from 26 m to 100 m in depth, respectively.
- V04: Basalt may appear at shallower than 10 m in depth. There is concern about seawater intrusion.
- V05: Basalt may appear at shallower than 10 m in depth. There is concern about seawater intrusion.

Survey Points on Geology Map generated by JICA Study Team

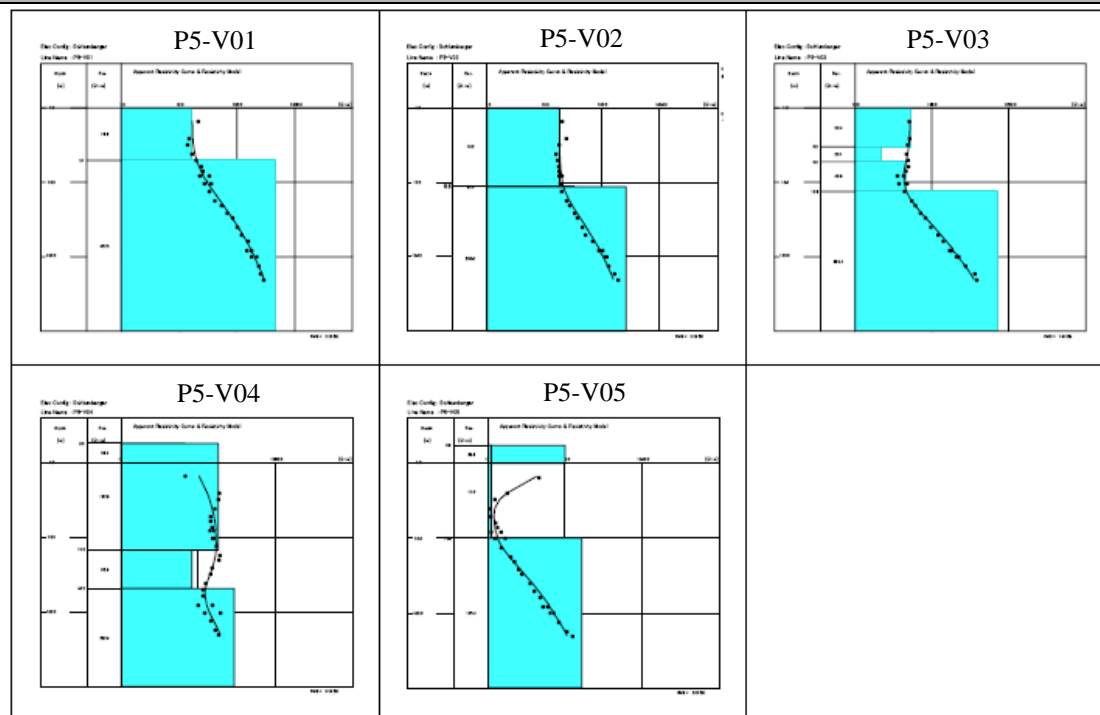


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-5: Son Phuoc			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P5-V01	Q (Pg1) /Be	P5-V02	Q (Pg1) /Be	P5-V03	Q (Pg1) /Be
	P5-V04	Qb2 (Pg1) /Pl + Be	P5-V05	Qb2 /Pl		

Results of the VES



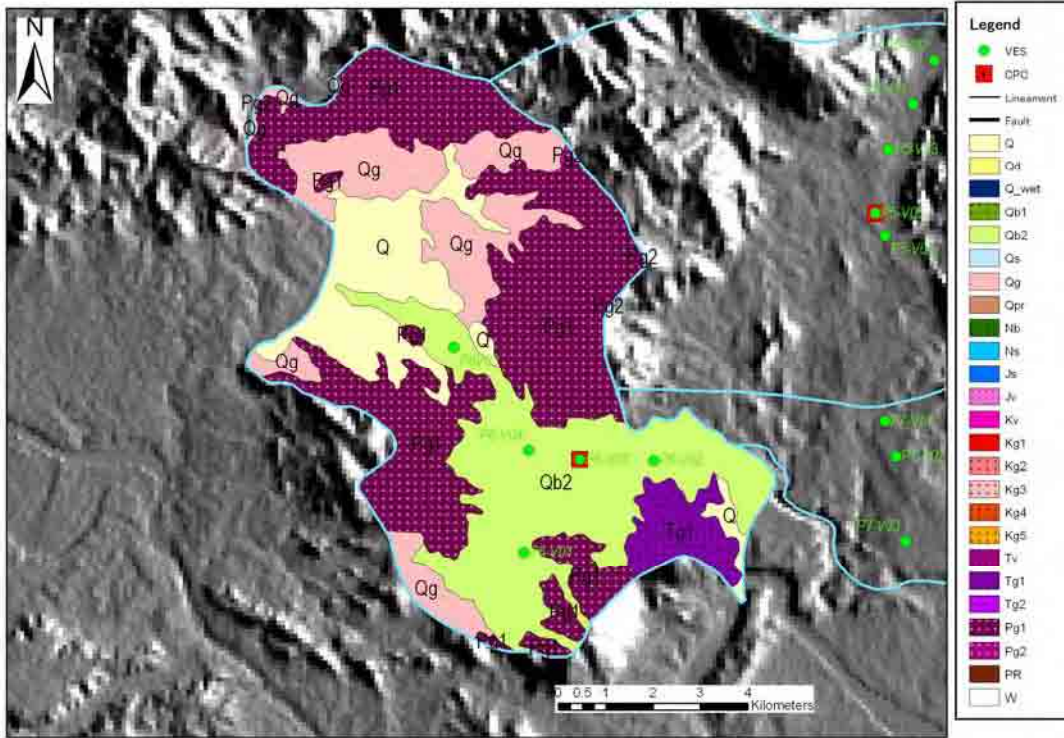
[Features of Apparent Resistivity]

- V01, V02, V03: Apparent resistivity from ground surface to around 10 m in depth and the below shows less change and becomes high value following the deeper depth of strata.
- V04: Apparent resistivity change with depth is less.
- V05: Apparent resistivity by 10 m in depth and the below shows quite low value and becomes high value following the deeper depth of strata.

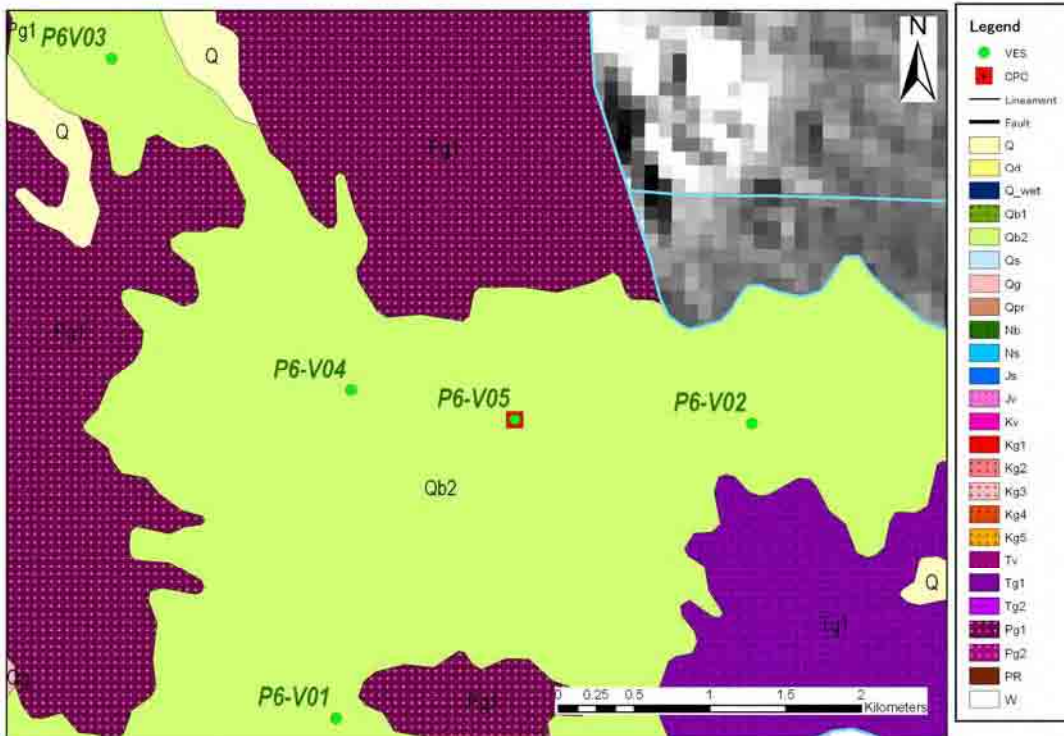
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at shallower than 10 m in depth.
- V02, V03: Granite may appear at around 10 m in depth.
- V04: Basalt and granite with fracture may appear near the ground surface and from around 10 m to 50 m in depth. The boring core shows that basalt, basalt with fracture / joint and granite with fracture appeared at 1 m in depth, from 10 m to 23 m in depth and from 23 m to 30 m in depth, respectively.
- V05: Basalt may appear at around 10 m in depth.

Survey Points on Geology Map generated by JICA Study Team

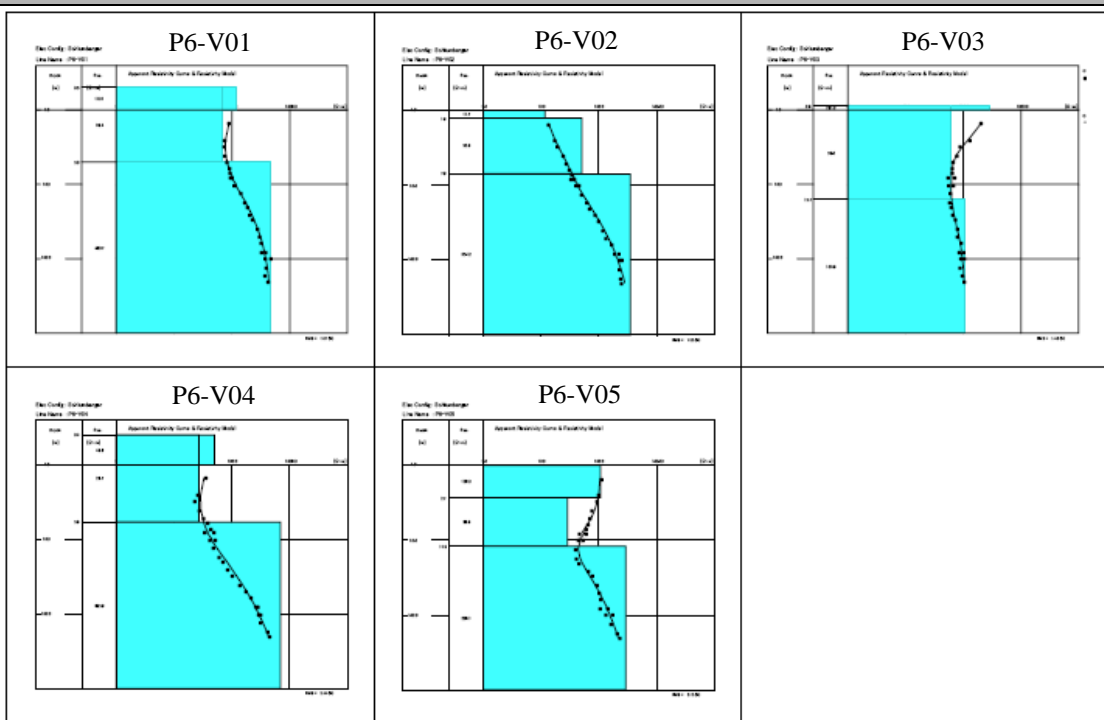


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-6: Ea Cha Rang			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P6-V01	Qb2 (Pg1) /Be	P6-V02	Qb2 (Pg1) /Be	P6-V03	Qb2 (Pg1) /Be
	P6-V04	Qb2 (Pg1) /Be	P6-V05	Qb2 (Pg1) /Be		

Results of the VES



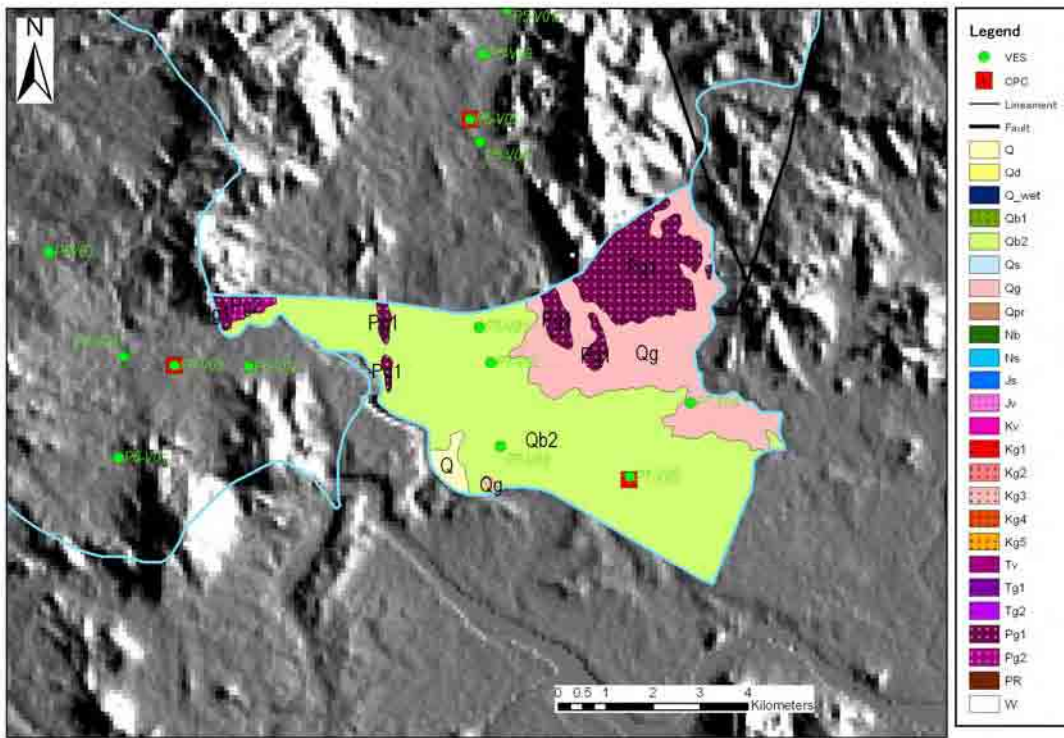
[Features of Apparent Resistivity]

- V01, V04: Apparent resistivity by 5 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.
- V02: Apparent resistivity becomes high value following the deeper depth of strata.
- V03: Apparent resistivity below 5 m in depth shows less change.
- V05: Apparent resistivity around 10 m in depth and the below shows the minimum value and becomes high value following the deeper depth of strata.

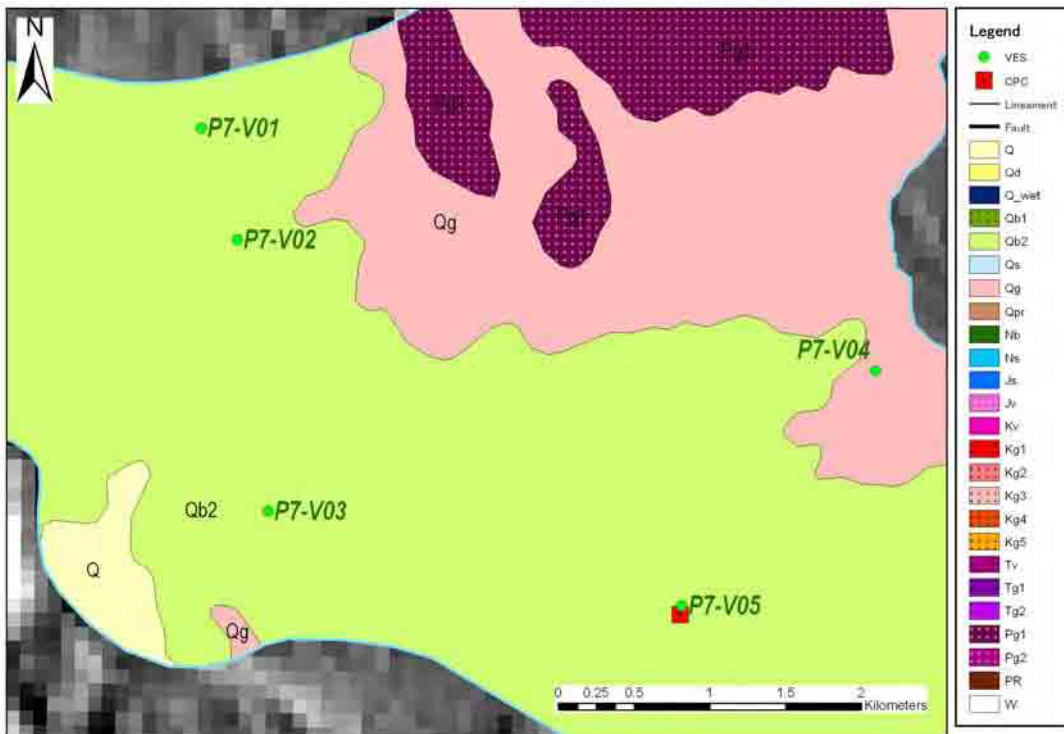
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V04: Granite may appear at shallower than 10 m in depth.
- V02: Granite may appear at around 10 m in depth.
- V03: Granite with weathering / fracture may appear from near the ground surface. The boring core shows that granite with weathering and with fracture appeared from 4m to 10 m in depth and from 10 m to 15 m in depth, respectively.
- V05: Granite may appear at around 10 m in depth.

Survey Points on Geology Map generated by JICA Study Team

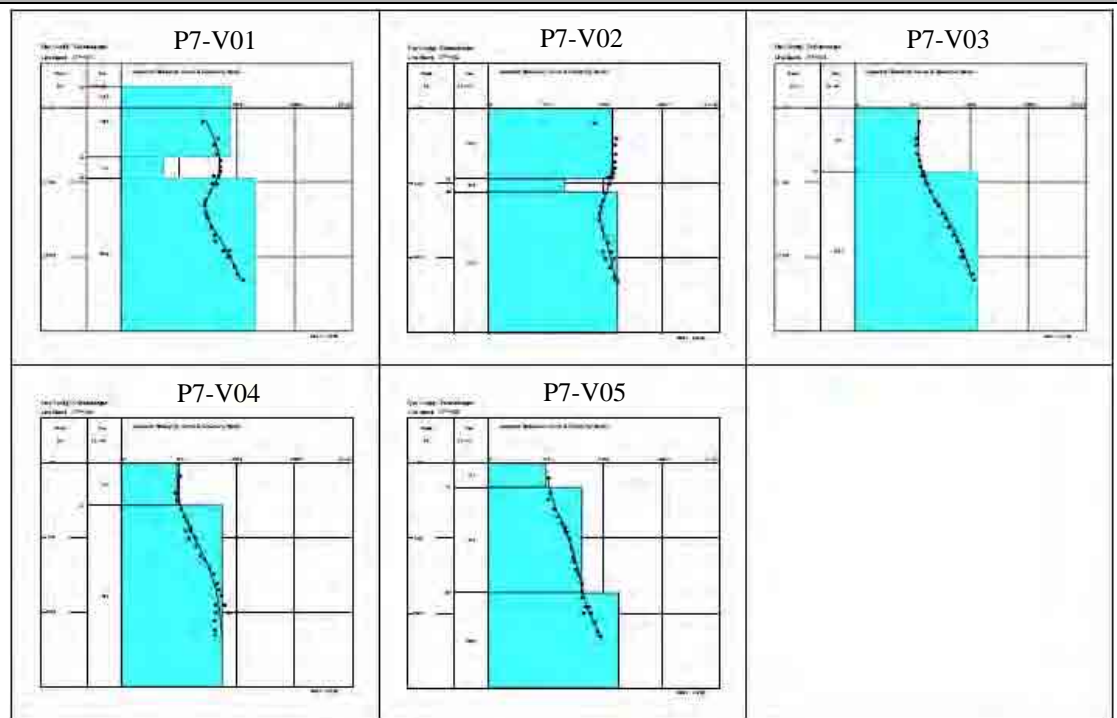


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-7: Suoi Bac			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	P7-V01	Qb2 (Pg1) / Be	P7-V02	Qb2 (Pg1) / Be	P7-V03	Qb2 (Pg1) / Be
	P7-V04	Qb2 /Pl	P7-V05	Qb2 (Pg1) /Pl + Be		

Results of the VES



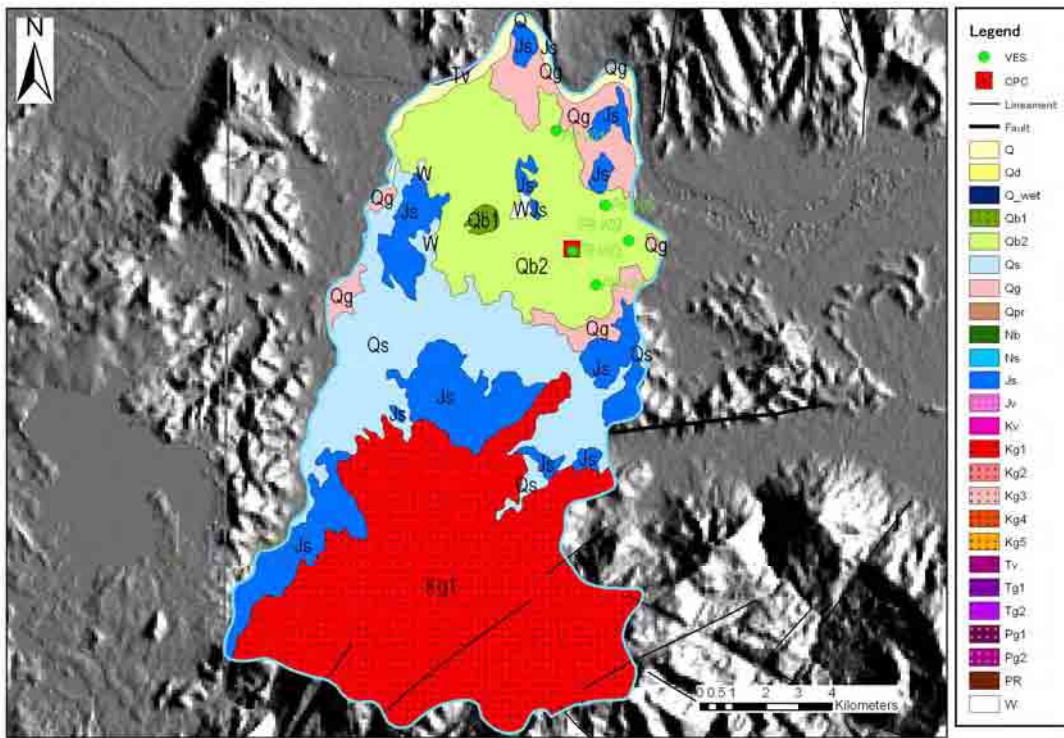
[Features of Apparent Resistivity]

- V01: Apparent resistivity below 20 m in depth becomes high value following the deeper depth of strata, and the fitting curve shows inverse-S shape.
- V03, V05: Apparent resistivity becomes high value following the deeper depth of strata.
- V04: Apparent resistivity by 80 m in depth and the below becomes high value following the deeper depth of strata and shows less change, respectively.

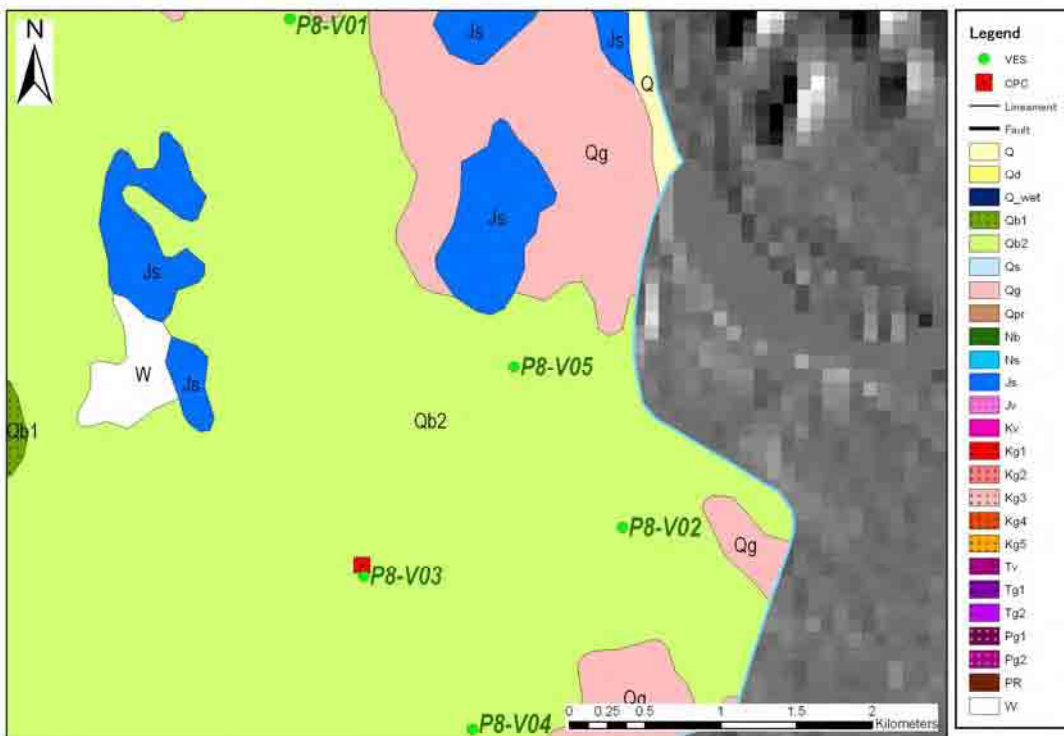
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite with weathering / fracture may appear from near the ground surface to around 10 m in depth. The boring core shows that granite with weathering and with fracture appeared from 2.5 m to 7.0 m in depth and from 15 m to 25 m in depth, respectively.
- V02: Granite may appear at around 10 m in depth.
- V03: Granite may appear at shallower than 10 m in depth.
- V04: Basalt may appear at shallower than 10 m in depth.
- V05: Basalt and granite may appear from near the ground surface and from around 50 in depth, respectively.

Survey Points on Geology Map generated by JICA Study Team

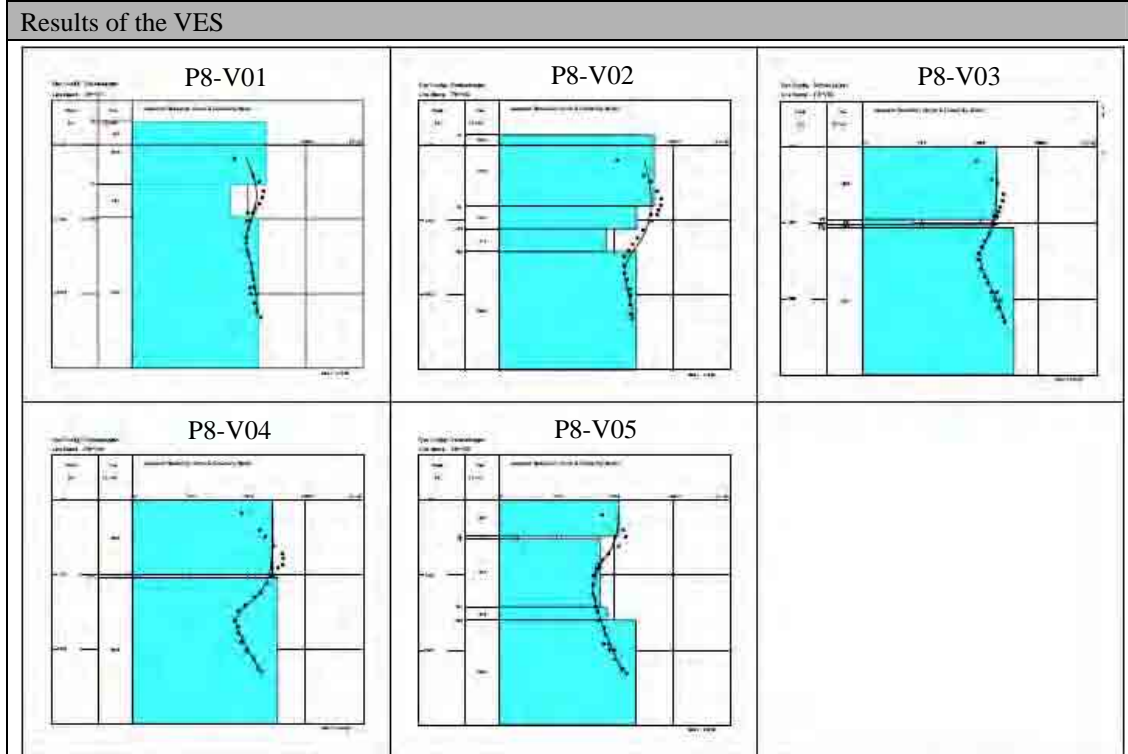


Enlargement of Location of the Survey Points



Province	Phu Yen	Commune	P-8: Son Thanh Dong	2/2
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Results of the HEP	Surface Geology (Bedrock)/Geology Layer at the VES Point					
None	P8-V01	Qb2 / Pl	P8-V02	Qb2 / Pl	P8-V03	Qb2 / Pl
	P8-V04	Qb2 / Pl	P8-V05	Qb2 / Pl		



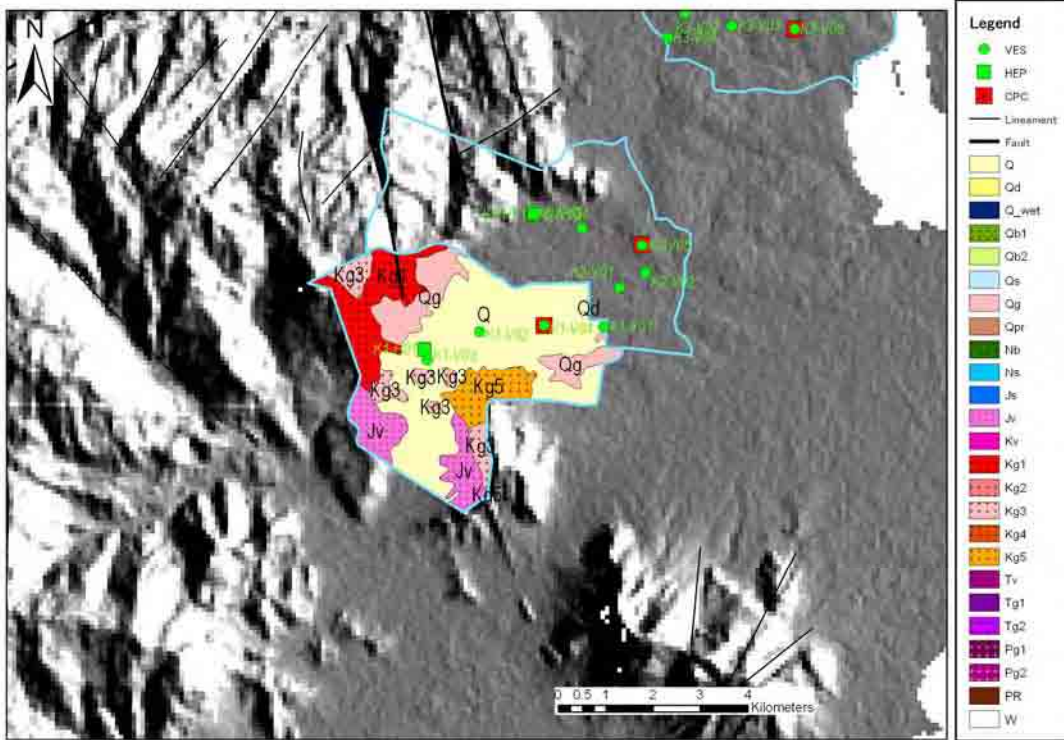
[Features of Apparent Resistivity]

- V01: Apparent resistivity change with depth is less and the fitting curve shows inverse-S shape.
- V02: Apparent resistivity below 30 m in depth shows less change.
- V03, V04: Apparent resistivity below 30 m to 40 m in depth becomes high value following the deeper depth of strata and the fitting curve shows inverse-S shape.
- V05: Apparent resistivity around 20 m in depth and the below shows the minimum value and becomes high value following the deeper depth of strata, respectively.

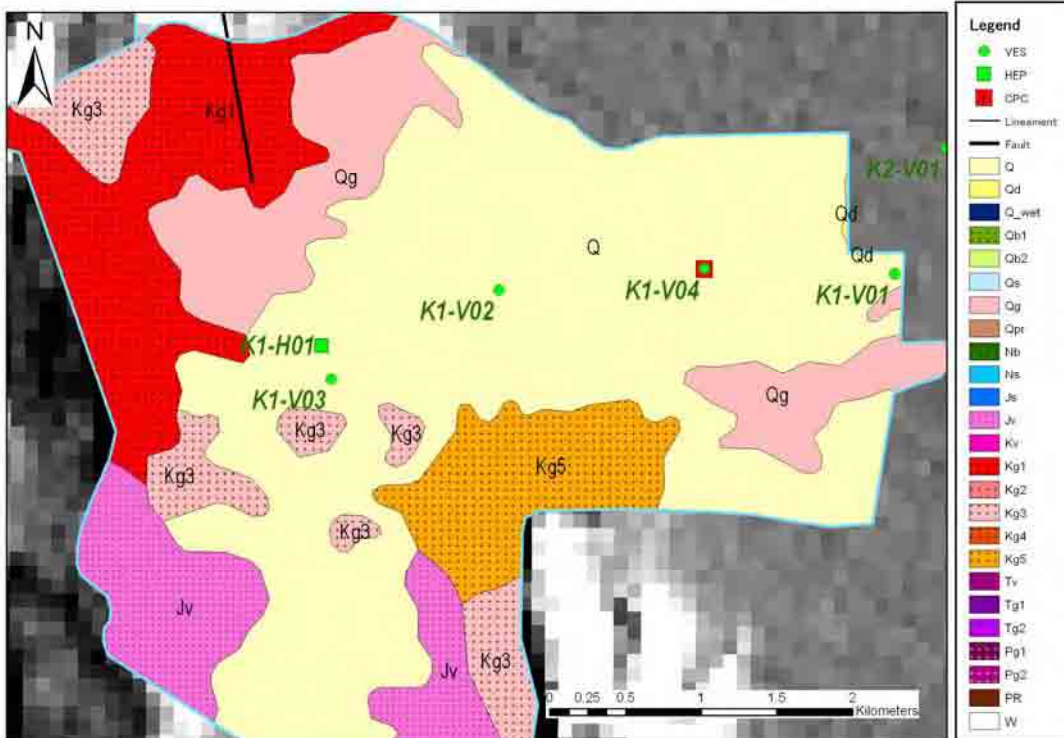
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Basalt and its fracture / joint section may appear from near the ground surface and at shallower than 10 m in depth with around 5 m in thickness, respectively.
- V02: Basalt and its fracture / joint section may appear from near the ground surface and from shallower than 10 m in depth with around 20 m in thickness. The boring core shows that basalt with strong weathering, and with fracture appeared from the ground surface to 9.5 m in depth, and from 9.5 m to 38 m in depth and 47 m to 57 m in depth, respectively.
- V03, V04: Basalt with weathering / fracture may appear from near the ground surface with around 10 m in thickness.
- V05: Basalt with weathering / fracture / joint may appear from near the ground surface with around 40 m in thickness.

Survey Points on Geology Map generated by JICA Study Team



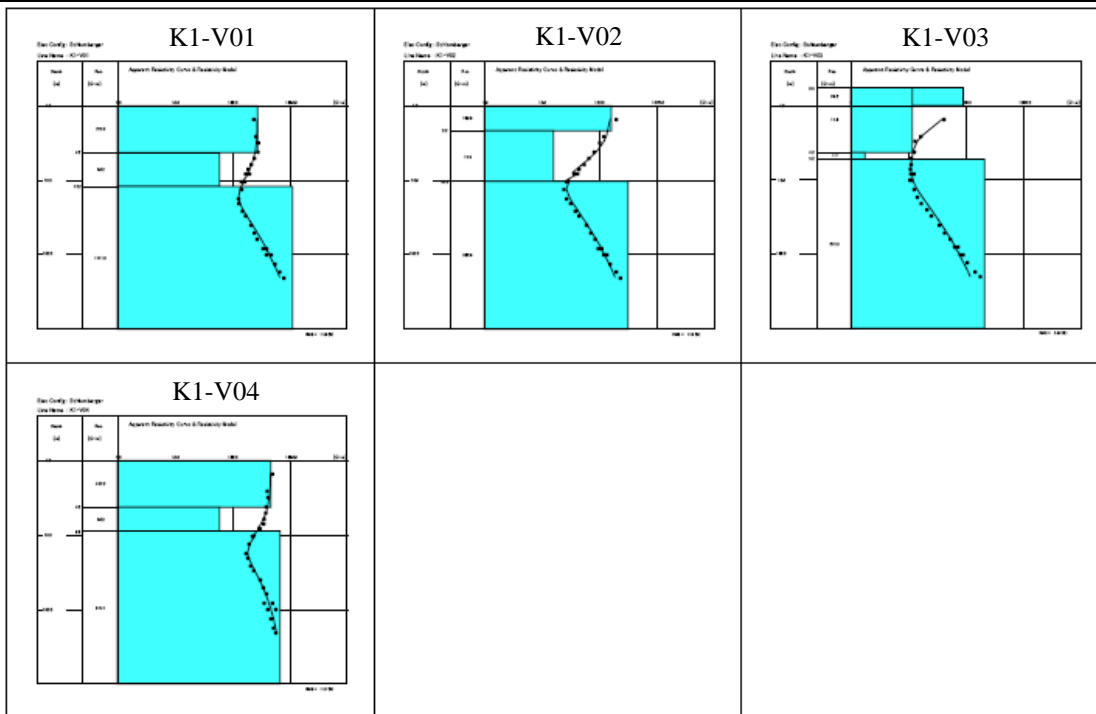
Enlargement of Location of the Survey Points



Province	Khanh Hoa	Commune	K-1: Cam AN Bac	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
	K1-V01	Q (Kg5) /De	K1-V02	Q (Kg5) /De	K1-V03	Q (Kg3) /De
	K1-V04	Q (Kg5) /De		Q (Kg5) /De		Q (Kg5) /De

Results of the VES



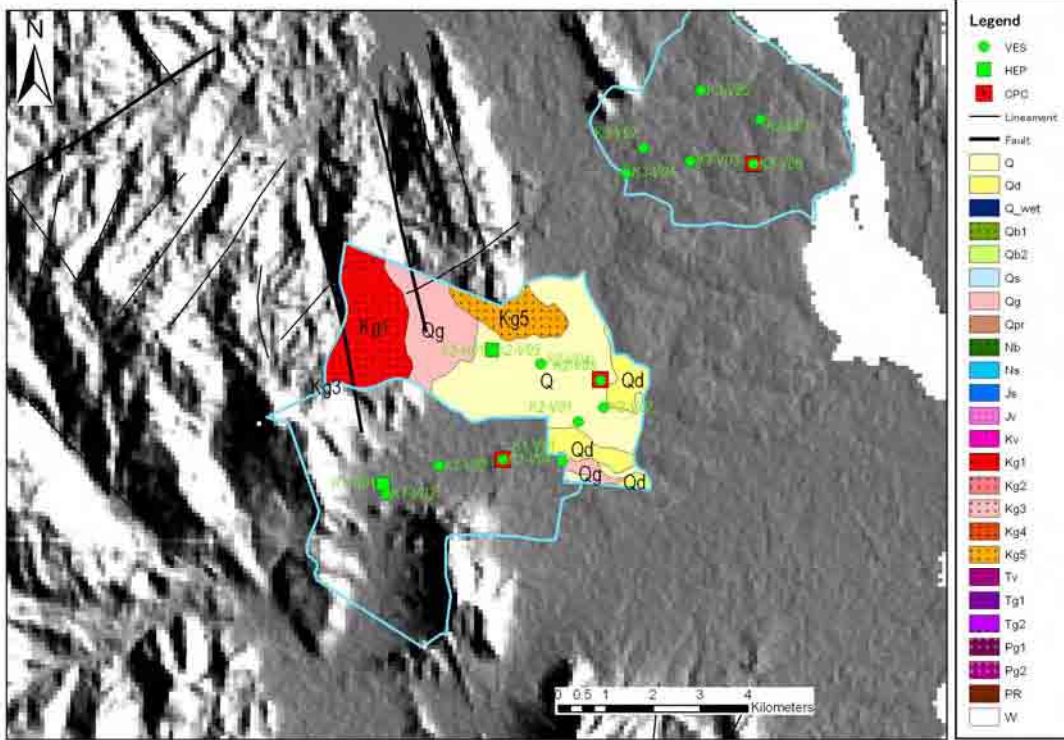
[Features of Apparent Resistivity]

- V01, V04: Apparent resistivity from ground surface to 15 m in depth and the below shows the minimum value and becomes high value following the deeper depth of strata.
- V02: Apparent resistivity change is similar to V01 and V02, and its value shows relatively low in comparison with the same.
- V03: Apparent resistivity from 1 m to 10 m in depth and the below shows less change and becomes high following the deeper depth of strata.

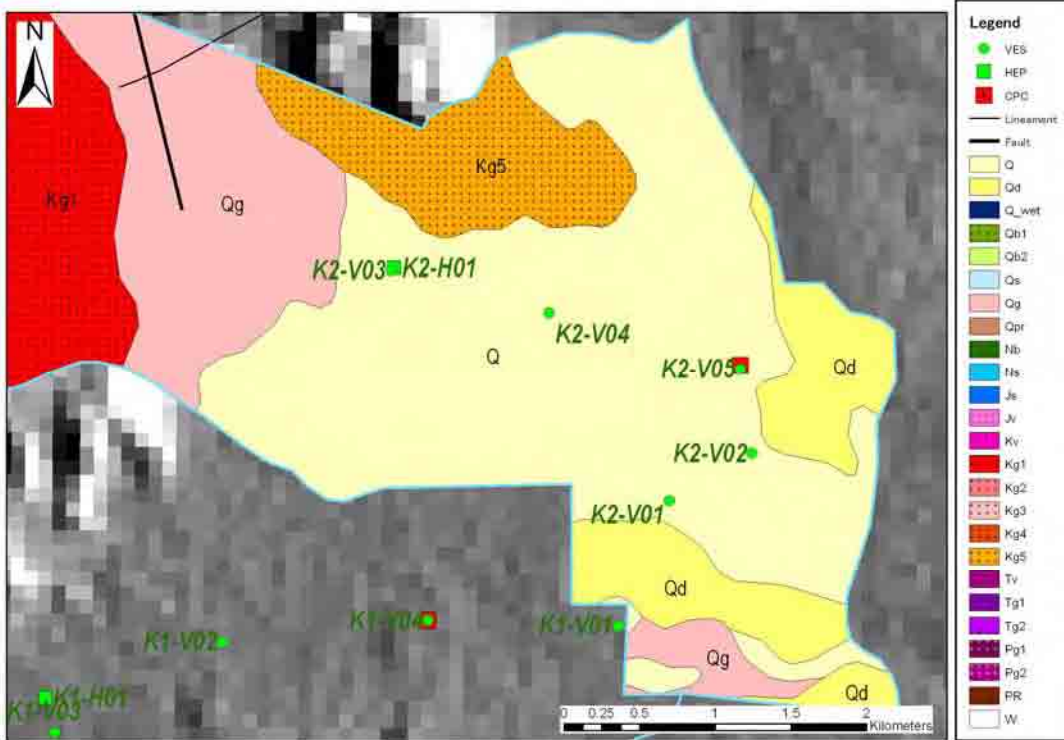
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V04: Granite may appear at around 10 m in depth.
- V02: Granite may appear at around 10 m in depth. The boring core shows that granite with weathering / fracture appeared from 11 m in depth
- V03: Granite may appear at shallower than 10 m in depth.

Survey Points on Geology Map generated by JICA Study Team

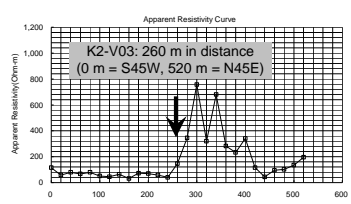


Enlargement of Location of the Survey Points

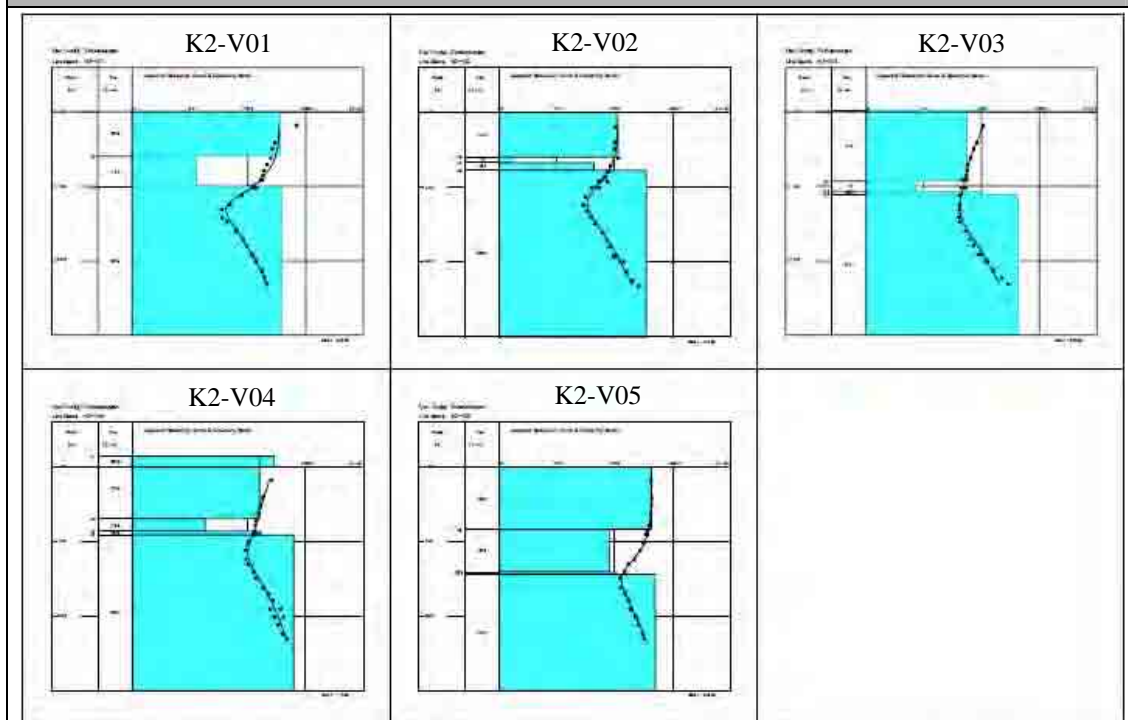


Province	Khanh Hoa	Commune	K-2: Cam Hiep Nam	2/2
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Results of the HEP	Surface Geology (Bedrock)/Geology Layer at the VES Point
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	K2-V01	Q (Kg5) /De	K2-V02	Q (Kg5) /De	K2-V03	Q (Kg5) /De
	K2-V04	Q (Kg5) /De	K2-V05	Q (Kg5) /De		

Results of the VES



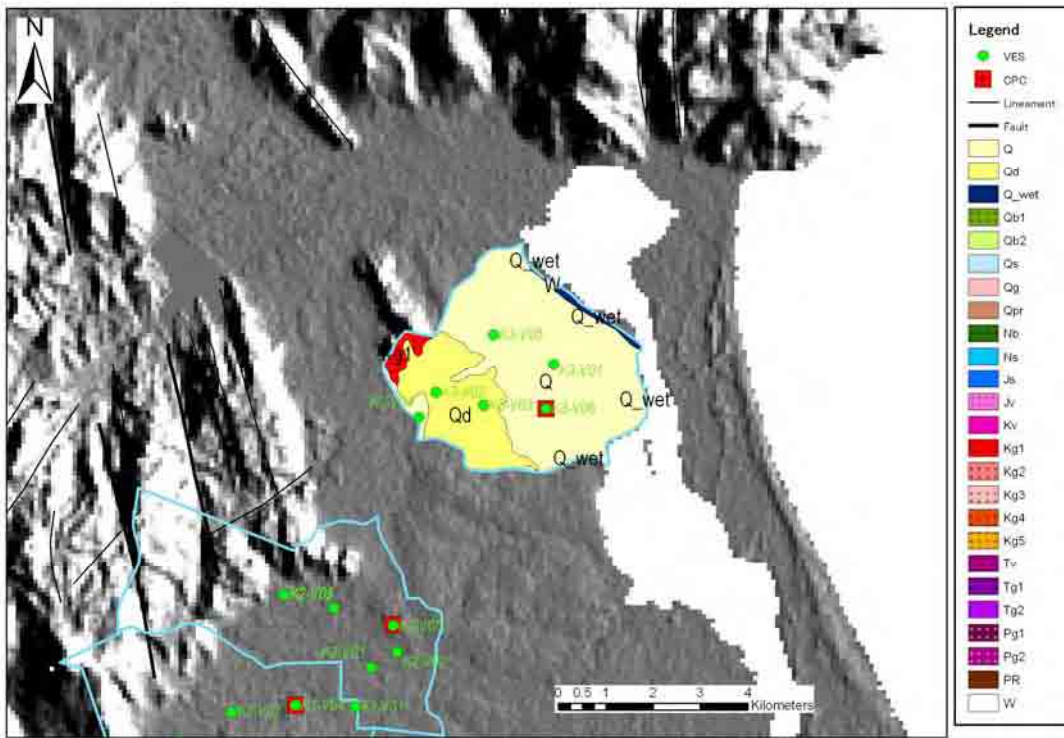
[Features of Apparent Resistivity]

- V01, V02, V03, V04: Apparent resistivity from ground surface to 20m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V05: Apparent resistivity change from ground surface to 30m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.

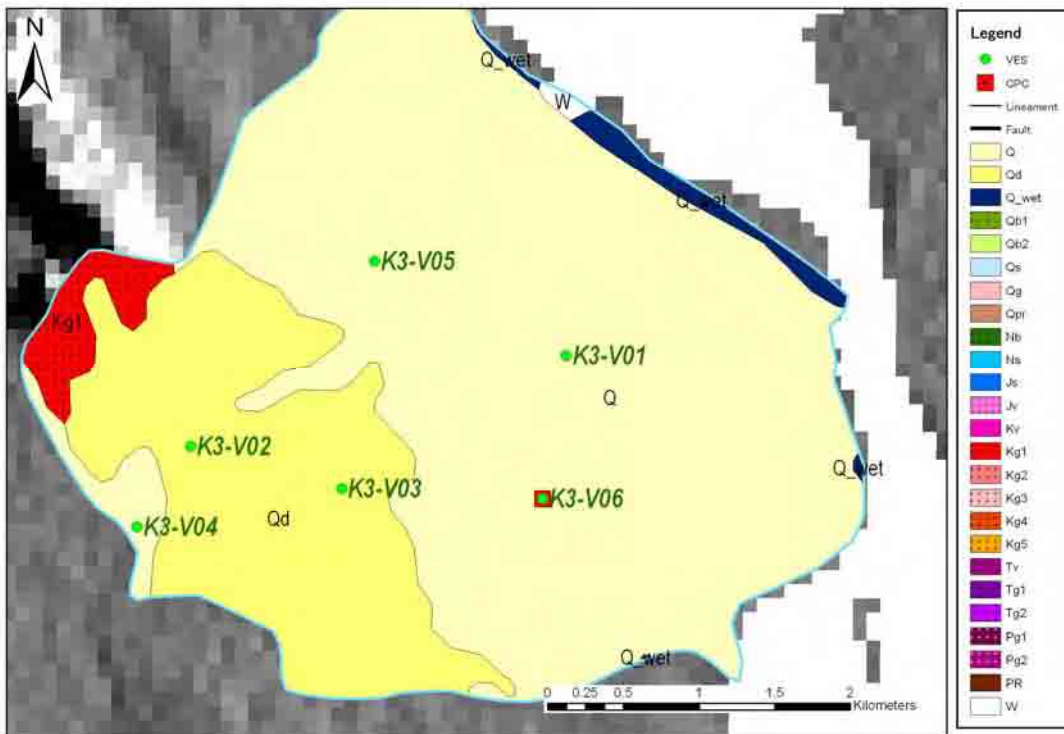
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V03: Granite may appear at around 10 m in depth.
- V02, V04: Granite may appear at shallower than 10 m in depth.
- V05: Granite with weathering may appear at shallower than 10 m in depth with around 20 m in thickness. The boring core shows that granite with weathering and with fracture appeared from 15 m to 31 m in depth and from 31 m to 35 m in depth, respectively.

Survey Points on Geology Map generated by JICA Study Team

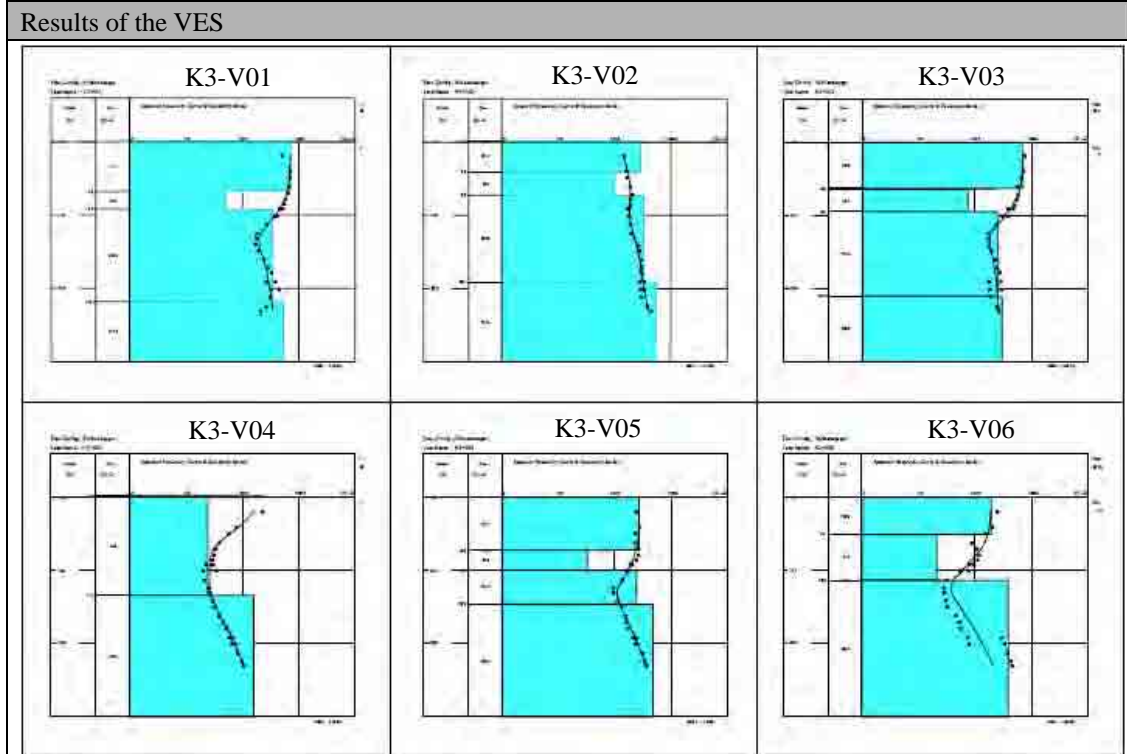


Enlargement of Location of the Survey Points



Province	Khanh Hoa	Commune	K-3: Cam Hai Tay	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	K3-V01	Q (Kg1) /De	K3-V02	Q (Kg1) /De	K3-V03	Q (Kg1) /De
	K3-V04	Q (Kg1) /De	K3-V05	Q (Kg1) /De	K3-V06	Q (Kg1) /De



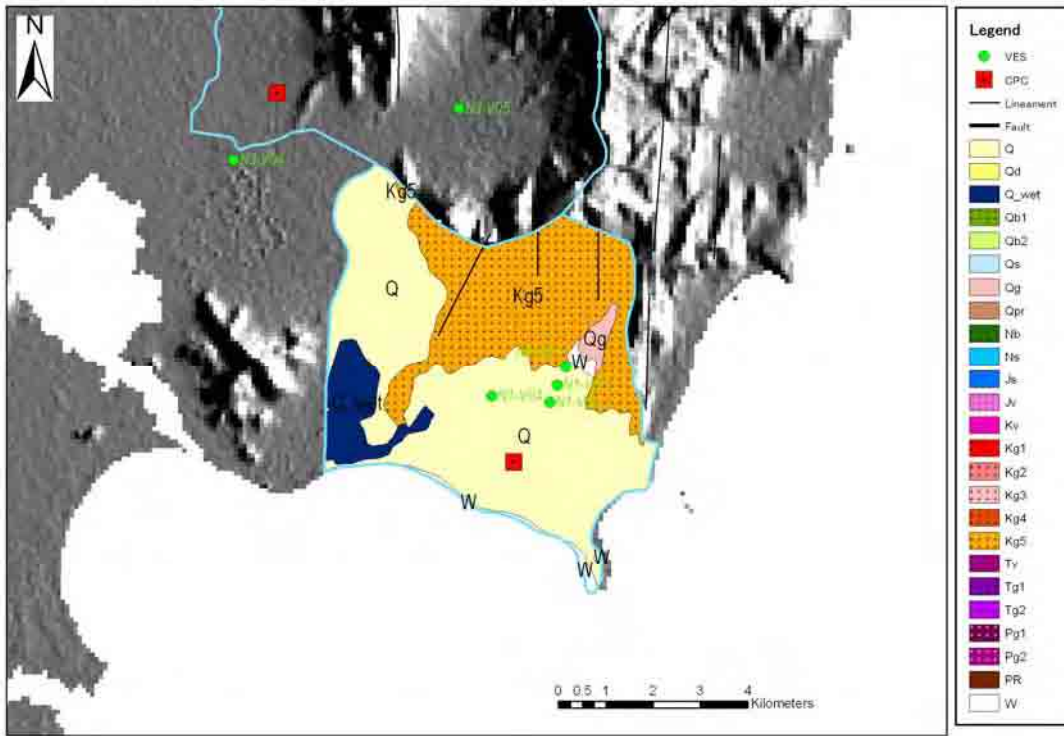
[Features of Apparent Resistivity]

- V01, V05: Apparent resistivity from ground surface to 20 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V02: Apparent resistivity becomes high value following the deeper depth of strata.
- V03: Apparent resistivity from ground surface to 20 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.
- V04: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.

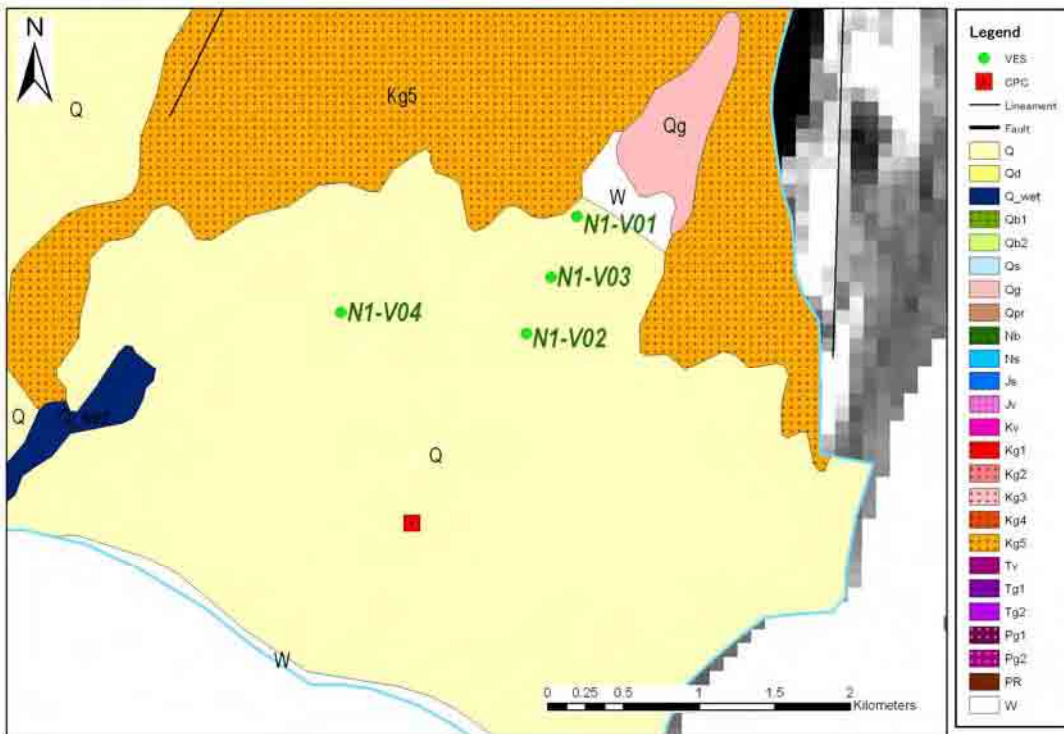
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V03, V05: Granite may appear at around 10 m in depth.
- V02: Granite may appear at shallower than 10 m in depth.
- V04: Granite with fracture may appear from near the ground surface to 20 m in depth. The boring core shows that intrusive andesite and granite with fracture appeared from 10 m to 20 m in depth and from 25 m to 40 m in depth, respectively.
- V06: Granite may appear at around 10 m to 20 m in depth.

Survey Points on Geology Map generated by JICA Study Team

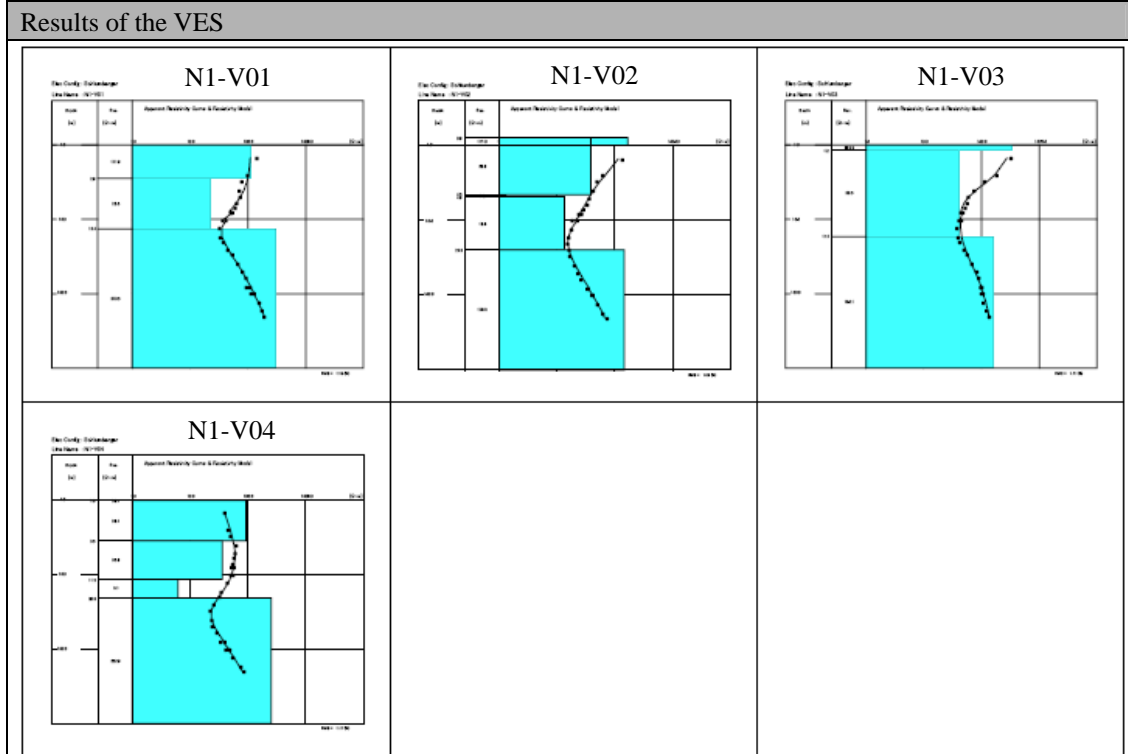


Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-1: Nhon Hai	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	N1-V01	Q (Kg5) /De	N1-V02	Q (Kg5) /De	N1-V03	Q (Kg5) /De
	N1-V04	Q (Kg5) /De				



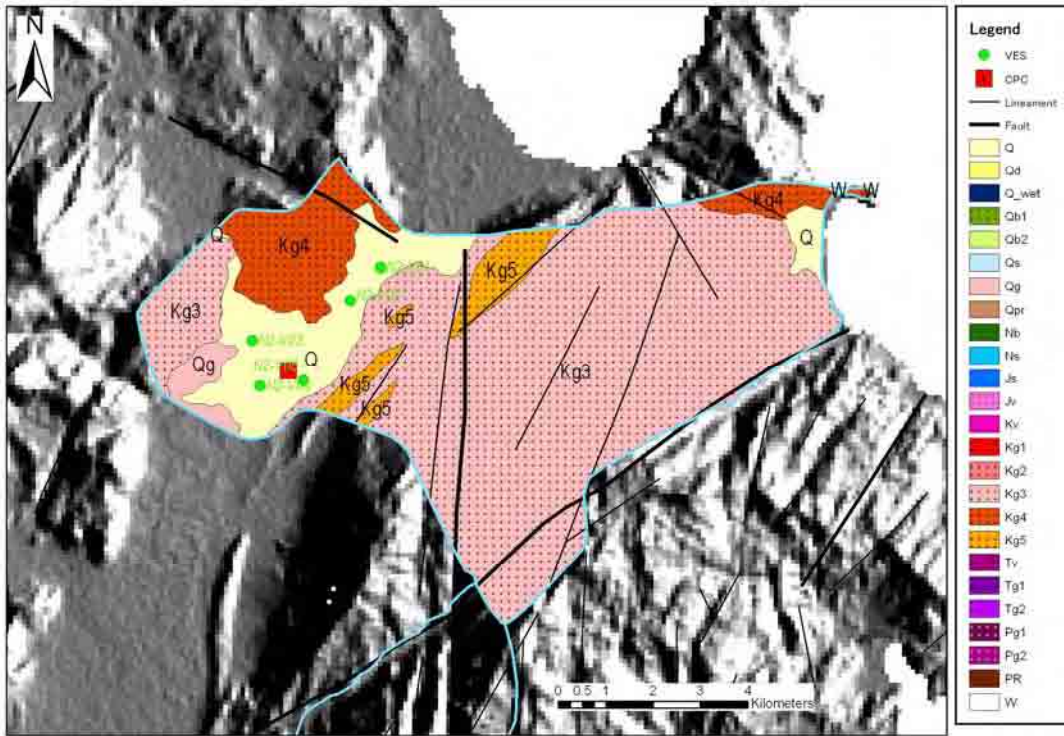
[Features of Apparent Resistivity]

- V01: Apparent resistivity from ground surface to 10 m - 20 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V02, V03: Apparent resistivity change is similar to V01, and its value shows relatively low in comparison with the same.
- V04: Apparent resistivity below 30 m in depth becomes high value following the deeper depth of strata, and the fitting curve shows inverse-S shape.

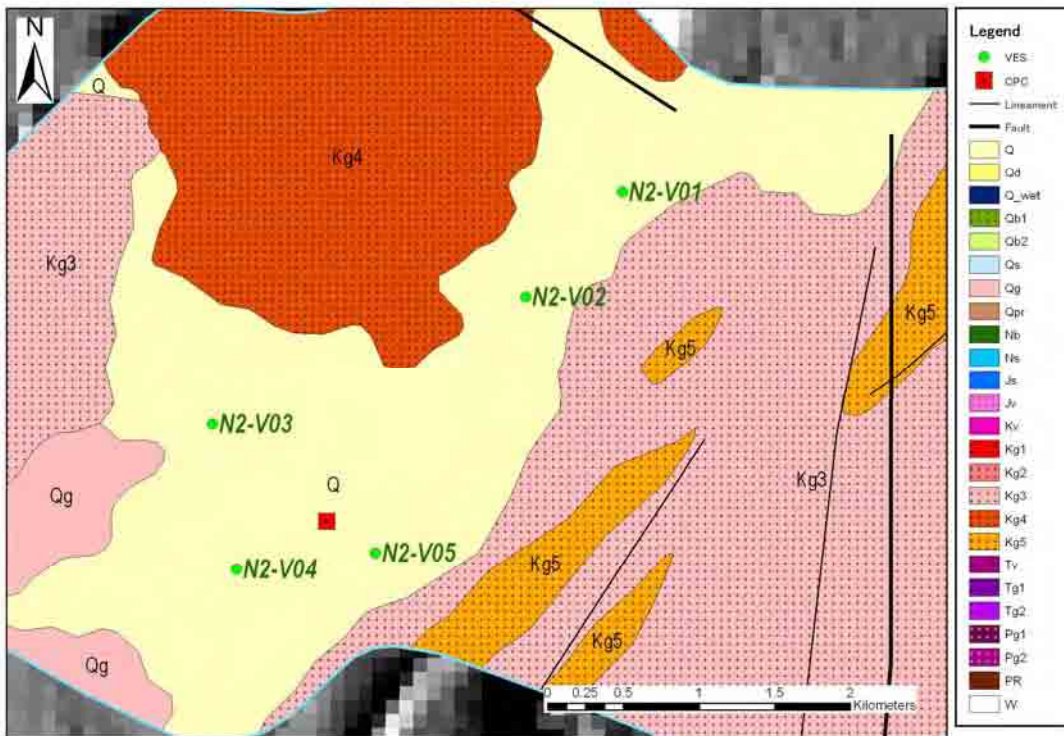
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite with weathering / fracture may appear at shallower than 10 m in depth with around 10 m in thickness.
- V02: Granite with weathering / fracture may appear shallower than 10 m in depth with around 20 m in thickness. The boring core shows that granite with weathering and with fracture form 5 m to 24 m in depth and from 24 m to 59 m, respectively.
- V03: Granite with weathering / fracture may appear from near the ground surface to 20 m in depth.
- V04: Granite may appear at around 20 m in depth.

Survey Points on Geology Map generated by JICA Study Team

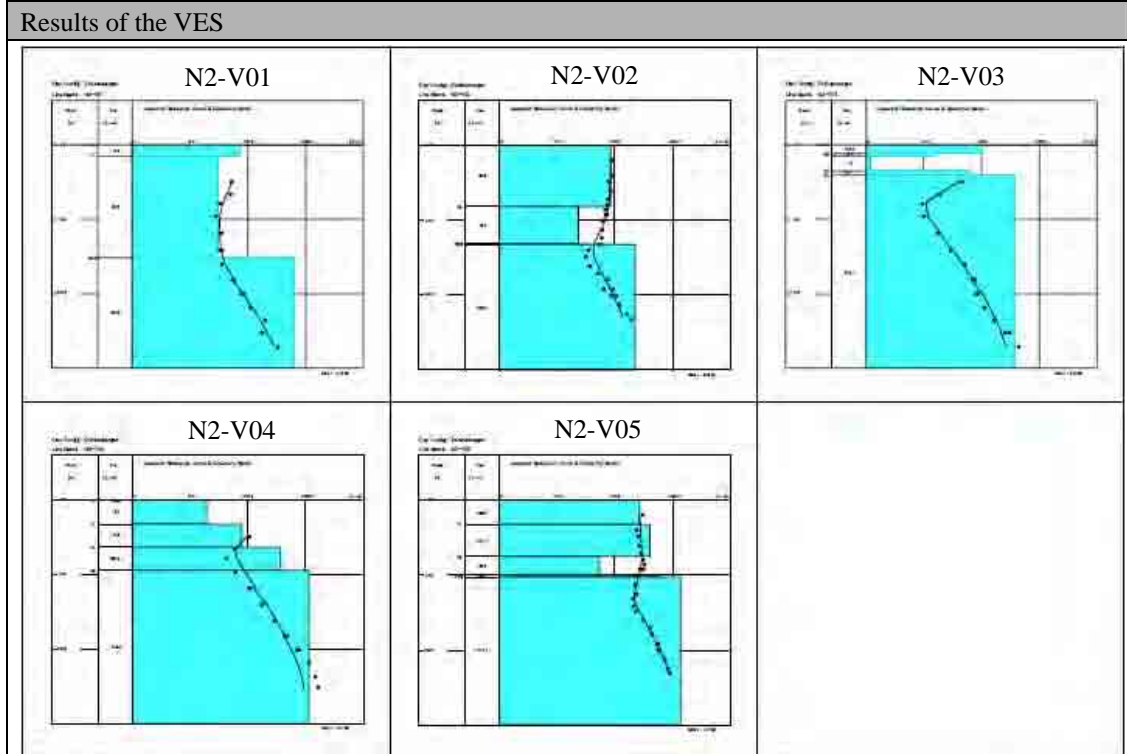


Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-2: Cong Hai	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	N2-V01	Q (Kg3) /De	N2-V02	Q (Kg3) /De	N2-V03	Q (Kg3) /De
	N2-V04	Q (Kg3) /De	N2-V05	Q (Kg3) /De		



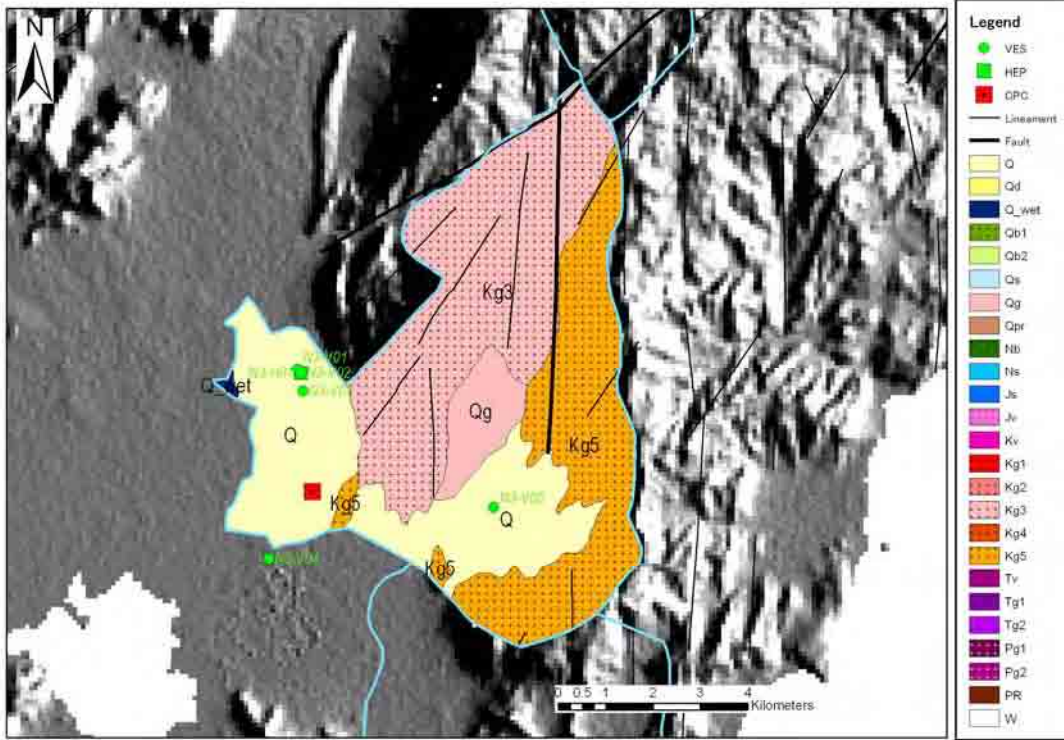
[Features of Apparent Resistivity]

- V01: Apparent resistivity from ground surface to 30 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V02: Apparent resistivity from ground surface to 10 m in depth, from 10 m to 30 m in depth and the below shows less change, becomes low value and high value following the deeper depth of strata, respectively.
- V03: Apparent resistivity below 6 m in depth becomes high value following the deeper depth of strata.
- V04: Apparent resistivity change is similar to V03, and its value shows high in comparison with the same.
- V05: Apparent resistivity change is similar to V02, and its value shows high in comparison with the same.

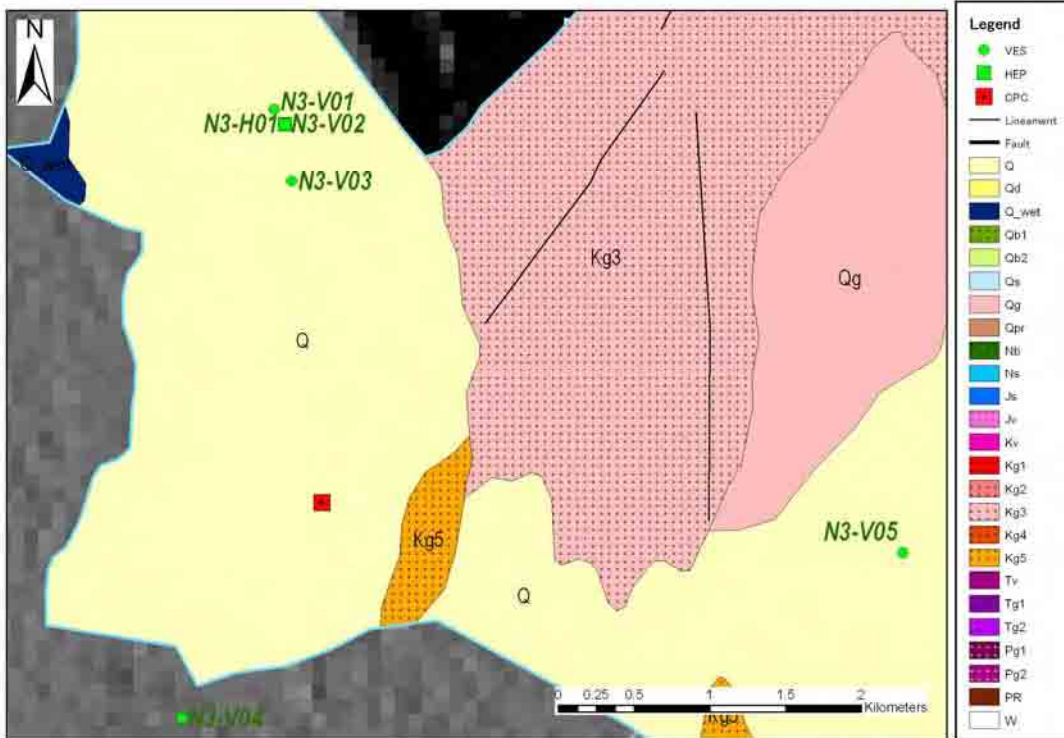
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at around 30 m in depth.
- V02: Granite with weathering / fracture may appear at shallower than 10 m depth with 10 to 20 m in thickness. The boring core shows that andesite with fracture appeared from 8.7 m to 24 m and the andesite is continued by 100 m in depth.
- V03: Granite may appear from near the ground surface.
- V04: Granite may appear at shallower than 10 m in depth.
- V05: Granite and with fracture may appear from near the surface and at around 5 m in depth with around 5 m in thickness, respectively.

Survey Points on Geology Map generated by JICA Study Team



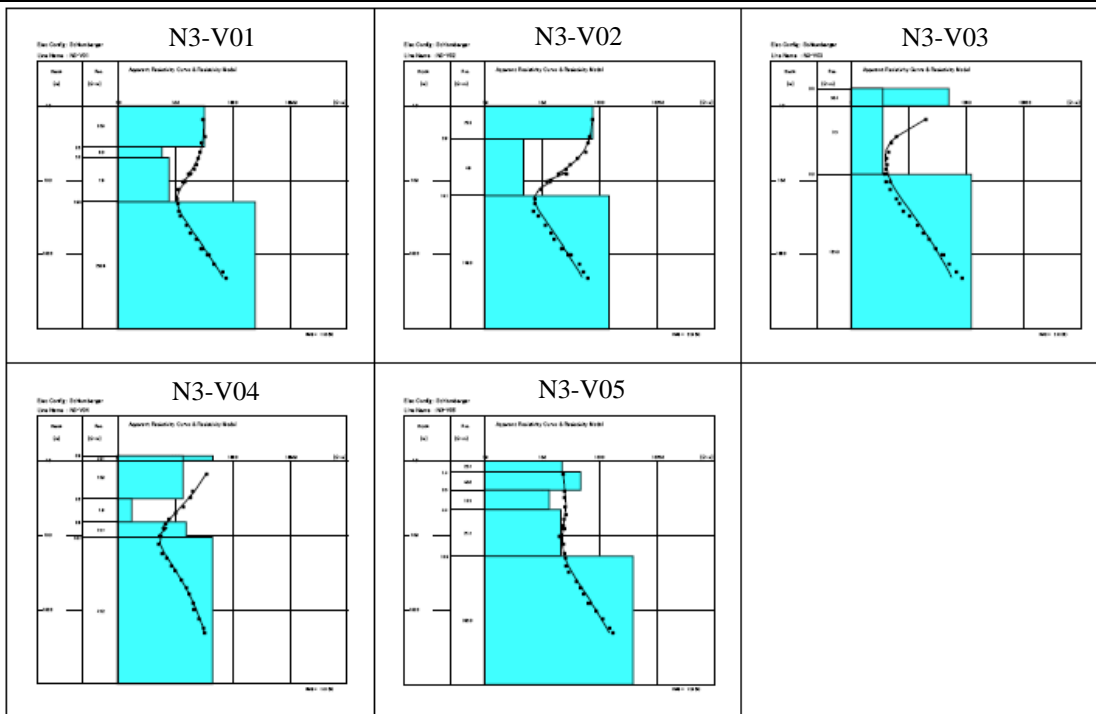
Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-3: Bac Son	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
<p>Apparent Resistivity Curve N3-V02: 260 m in distance (0 m = W, 520 m = E)</p>	N3-V01	Q (Kg3) /De	N3-V02	Q (Kg3) /De	N3-V03	Q (Kg3) /De
	N3-V04	Q (Kg3) /De	N3-V05	Q (Kg3) /De		

Results of the VES



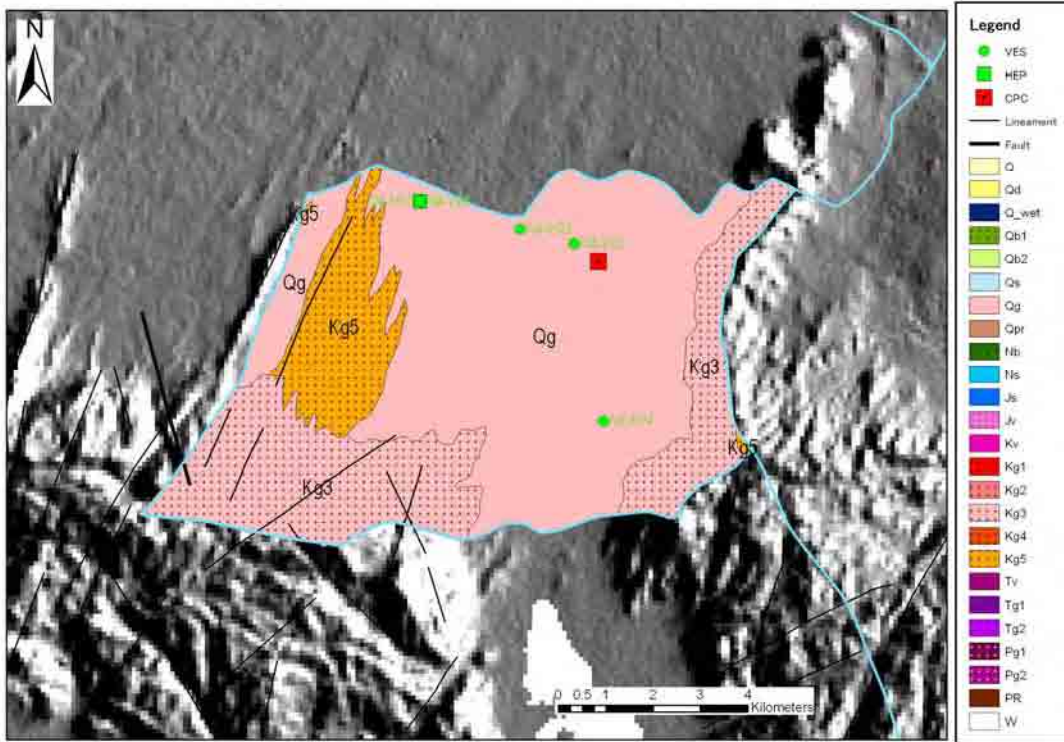
[Features of Apparent Resistivity]

- V01, V02: Apparent resistivity from ground surface to 20 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V03, V04: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V05: Apparent resistivity from ground surface to 10 m - 20 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.

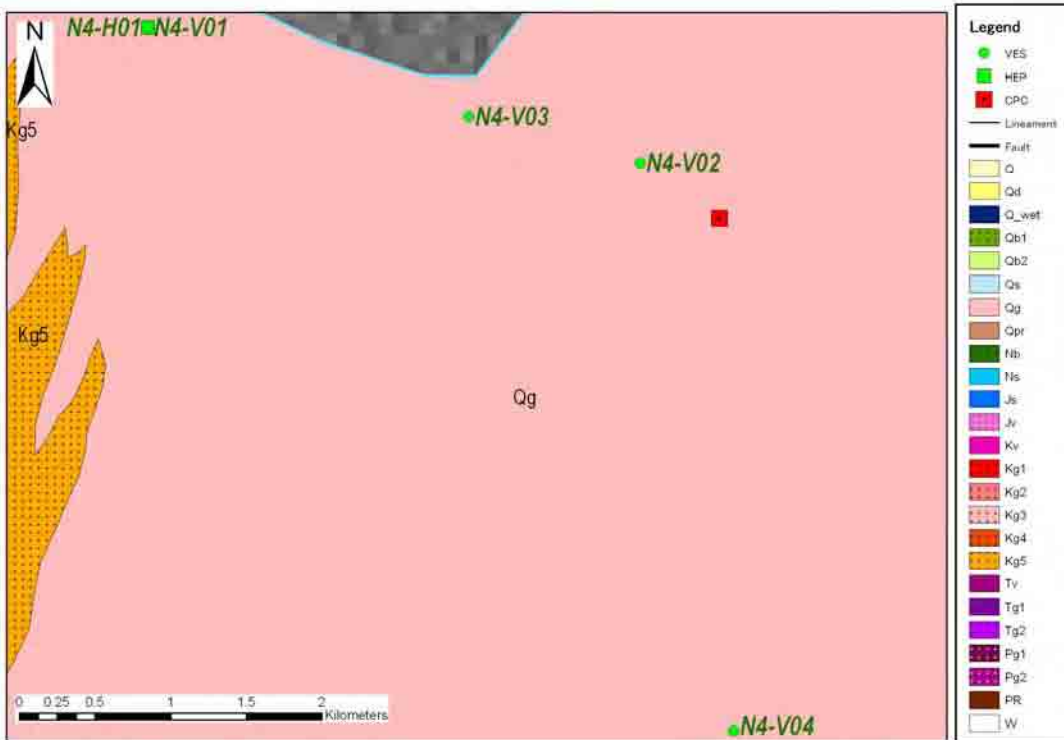
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite with weathering / fracture may appear at shallower than 10 m in depth with around 25 m in thickness. There is concern about seawater intrusion.
- V02: Granite with weathering / fracture may appear at shallower than 10 m in depth with around 20 m in thickness. The boring core shows that Granite with weathering and with fracture appeared from 5 m to 11 m in depth and from 11 m to 25 m in depth respectively.
- V03, V04: Granite may appear at around 10 m in depth. There is concern about seawater intrusion.
- V05: Granite may appear at around 20 m in depth.

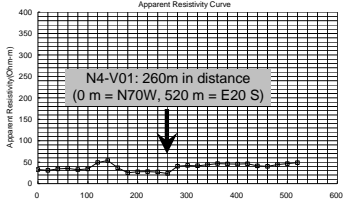
Survey Points on Geology Map generated by JICA Study Team



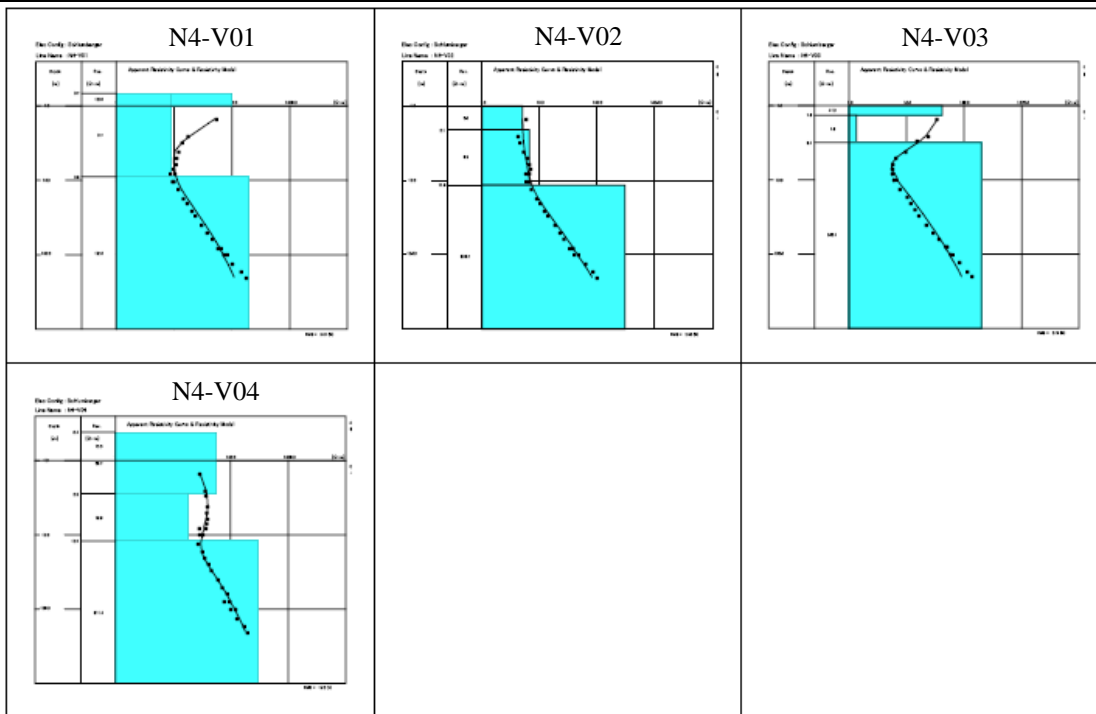
Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-4: Phuoc Minh	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
	N4-V01	Qg (Kg3) /De	N4-V02	Qg (Kg3) /De	N4-V03	Qg (Kg3) /De
	N4-V04	Qg (Kg3) /De				

Results of the VES



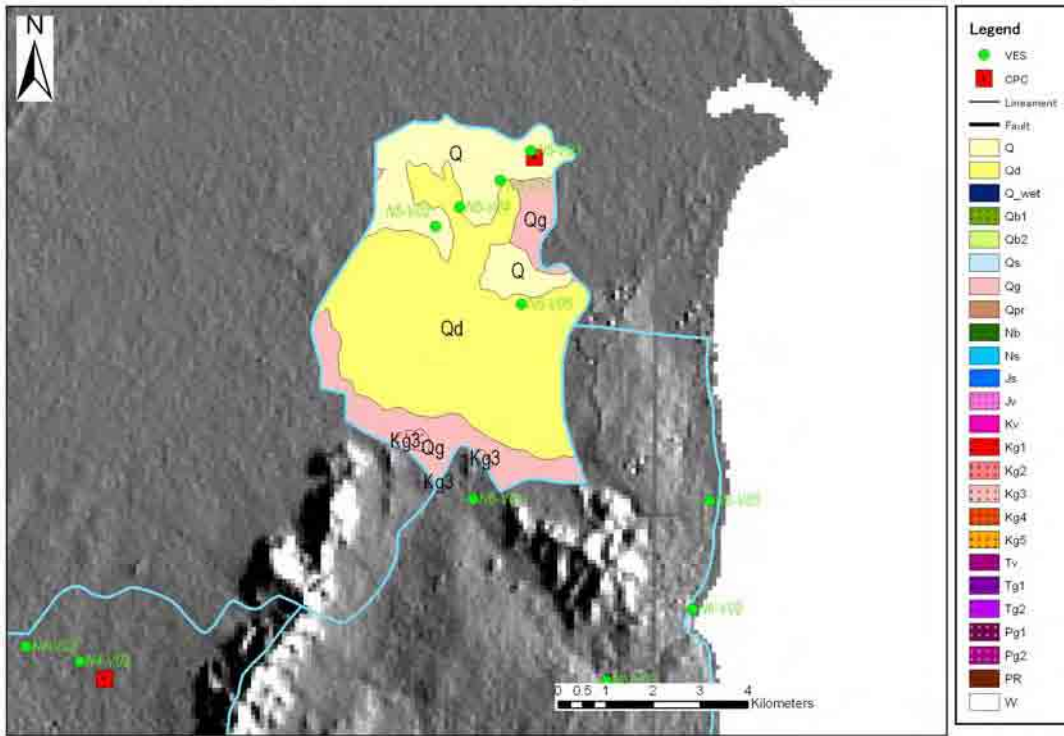
[Features of Apparent Resistivity]

- V01, V03: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V02: Apparent resistivity from ground surface to 10 m in depth and the below becomes high value gently within 10 ohm-m and low value following the deeper depth of strata, respectively.
- V04: Apparent resistivity from ground surface to 10 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.

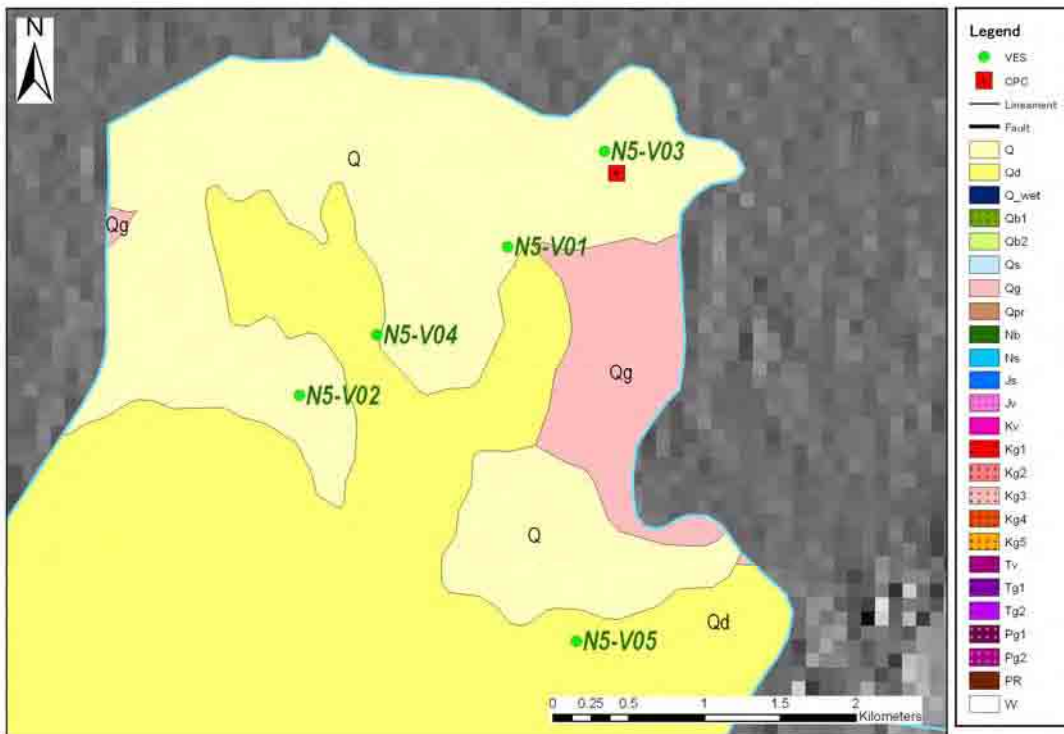
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at around 10 m in depth. There is concern about seawater intrusion. The boring core shows that granite and with fracture appeared from 2 m to 15 m and from 15 m and 35 m, respectively.
- V02: Granite may appear at around 10 m in depth. There is concern about seawater intrusion.
- V03: Granite may appear at shallower than 10 m in depth. There is concern about seawater intrusion.
- V04: Granite may appear at around 10 m in depth.

Survey Points on Geology Map generated by JICA Study Team

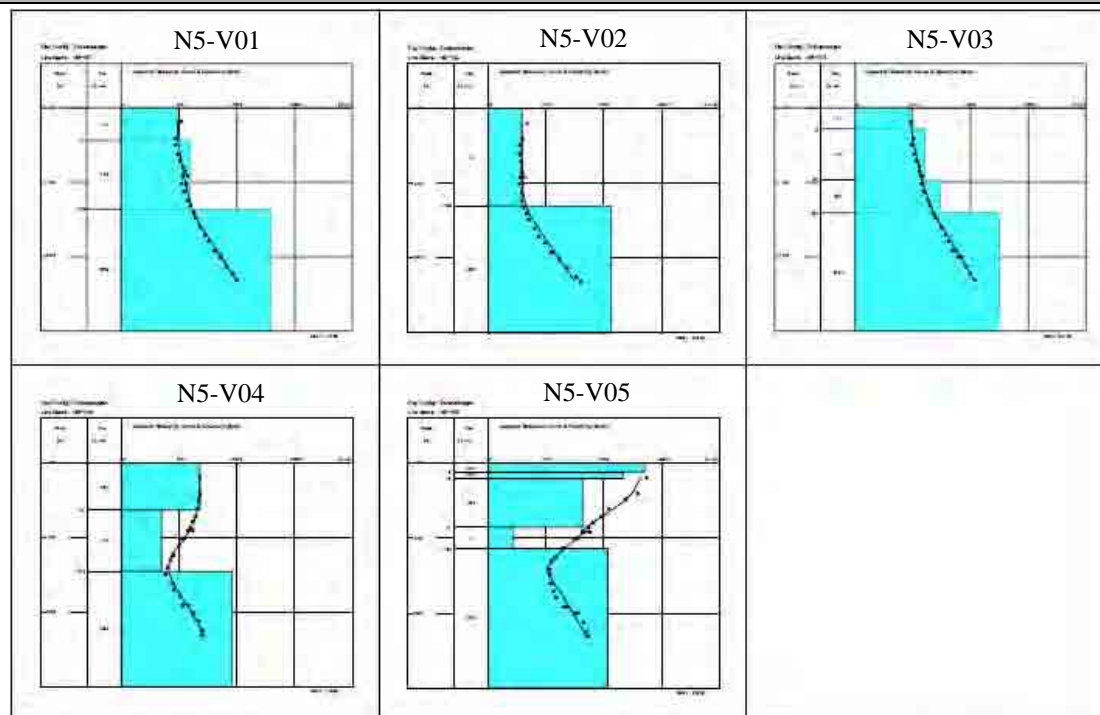


Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-5:			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	N5-V01	Q (Kg3) /De	N5-V02	Q (Kg3) /De	N5-V03	Q (Kg3) /De
	N5-V04	Qd (Kg3) /De	N5-V05	Qd (Kg3) /De		

Results of the VES



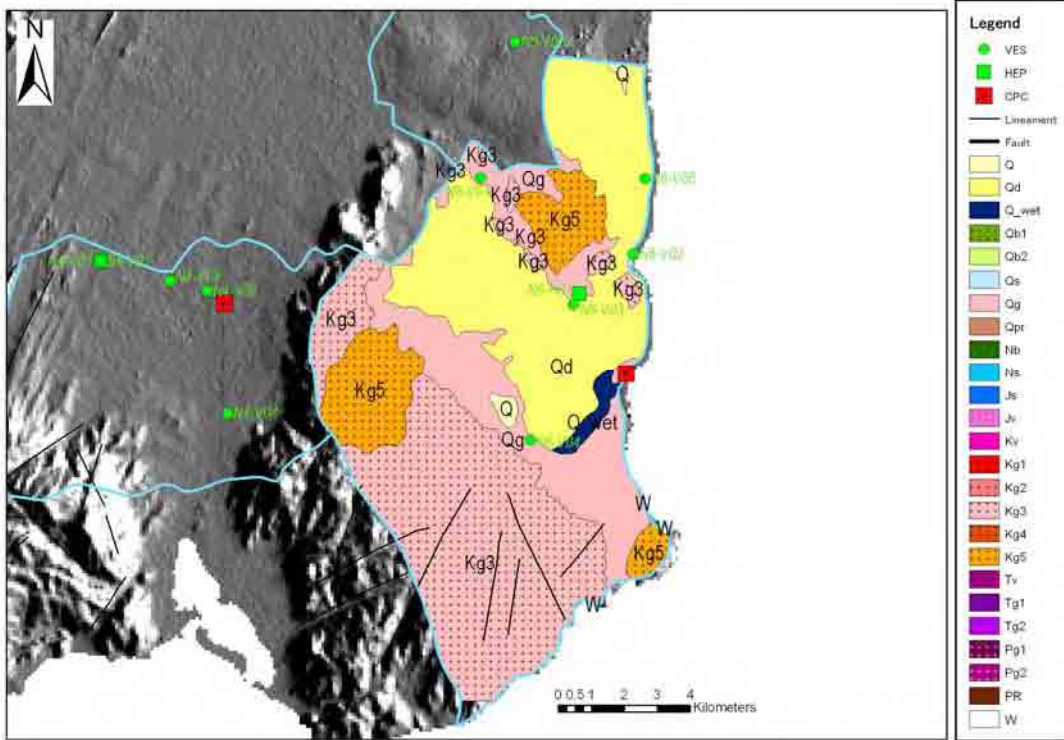
[Features of Apparent Resistivity]

- V01, V02, V03: Apparent resistivity becomes high value following the deeper depth of strata.
- V04: Apparent resistivity from ground surface to 30 m in depth and the below becomes low value gently and becomes high value following the deeper depth of strata, respectively.
- V05: Apparent resistivity from ground surface to 30 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.

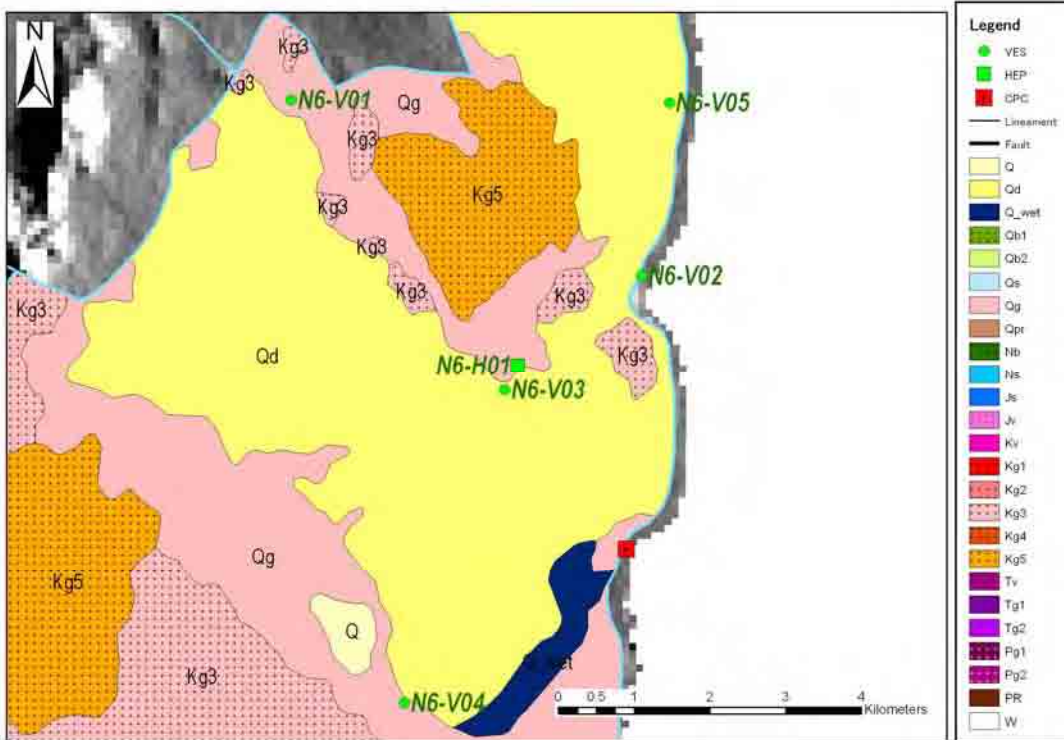
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V03: Granite may appear at around 20 m to 30 m in depth. There is concern about seawater intrusion.
- V02: Granite may appear at around 20 m in depth. There is concern about seawater intrusion. The boring core shows that granite with weathering and with fracture from 8 m to 16 m in depth and from 16 m to 26.5 m in depth, respectively.
- V04: Granite may appear at around 30 m in depth. There is concern about seawater intrusion.
- V05: Granite may appear at around 10 m in depth. There is concern about seawater intrusion.

Survey Points on Geology Map generated by JICA Study Team



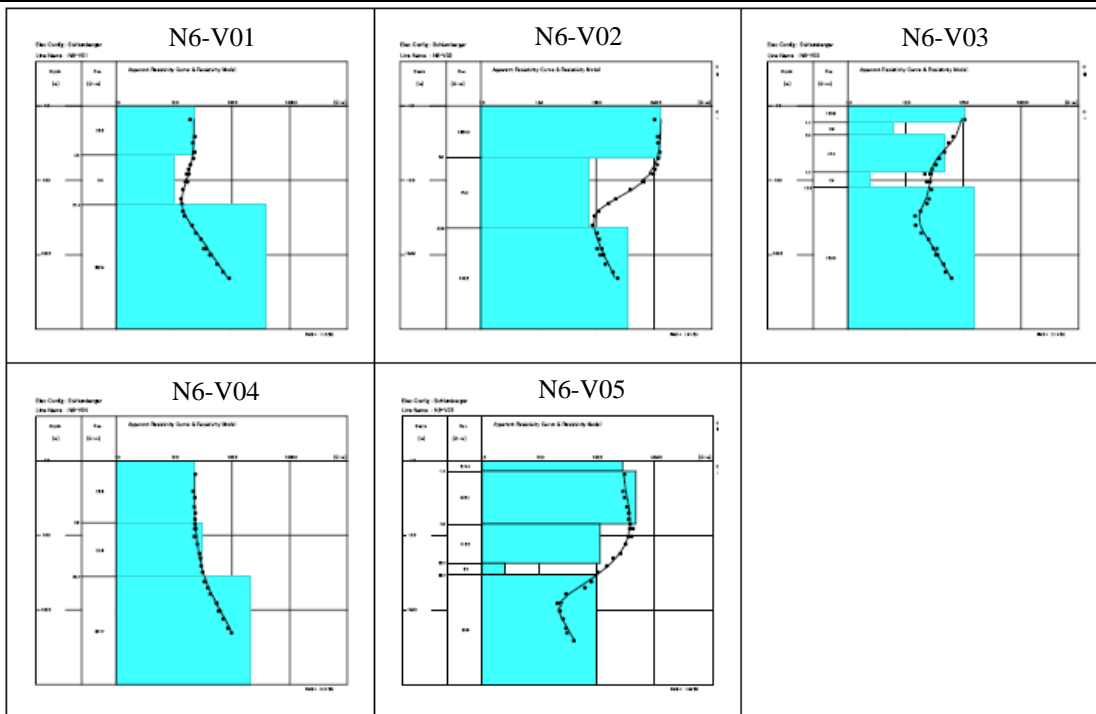
Enlargement of Location of the Survey Points



Province	Ninh Thuan	Commune	N-6: Phuoc Dinh	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
<p>N6-V03: 160 m in distance (0 m to 520 m = N40E)</p>	N6-V01	Qg (Kg3) /De	N6-V02	Qd (Kg3) /De	N6-V03	Qg (Kg3) /De
	N6-V04	Qg (Kg3) /De	N6-V05	Qd (Kg3) /De		

Results of the VES



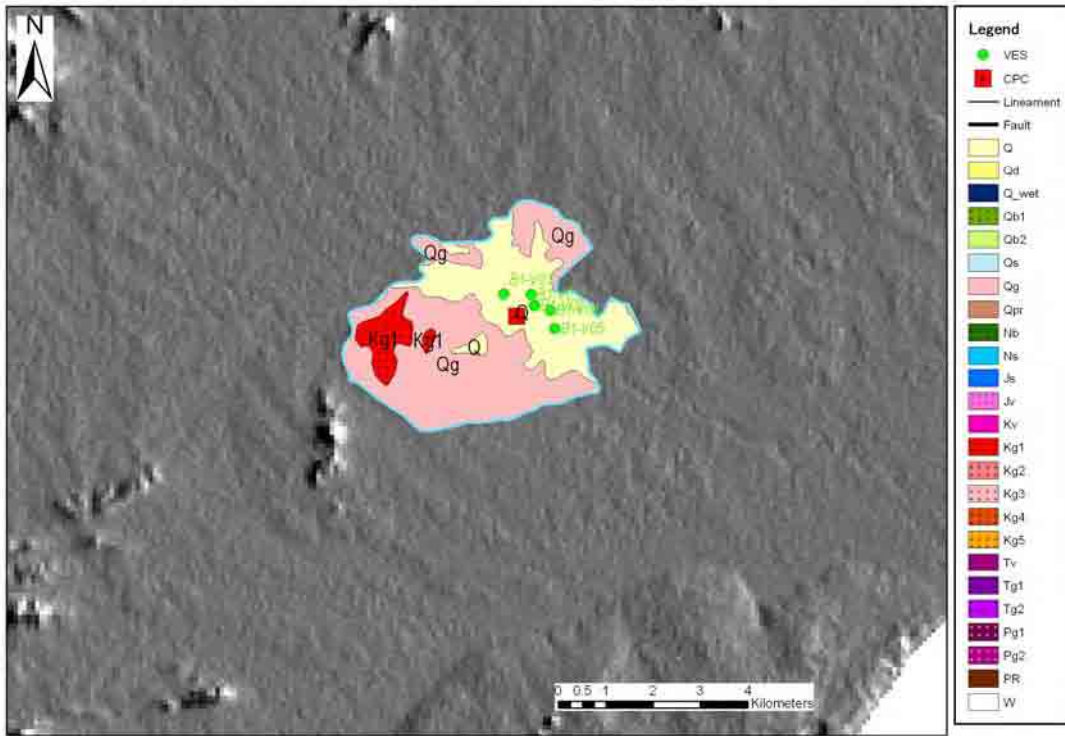
[Features of Apparent Resistivity]

- V01, V03: Apparent resistivity from ground surface to 20 m - 30 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V02, V05: Apparent resistivity above 10 m in depth, from 10 m to 50 m – 80 m in depth and the below shows high value in comparison with other depth, becomes low value and high value following the deeper depth of strata, respectively.
- V04: Apparent resistivity above 10 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.

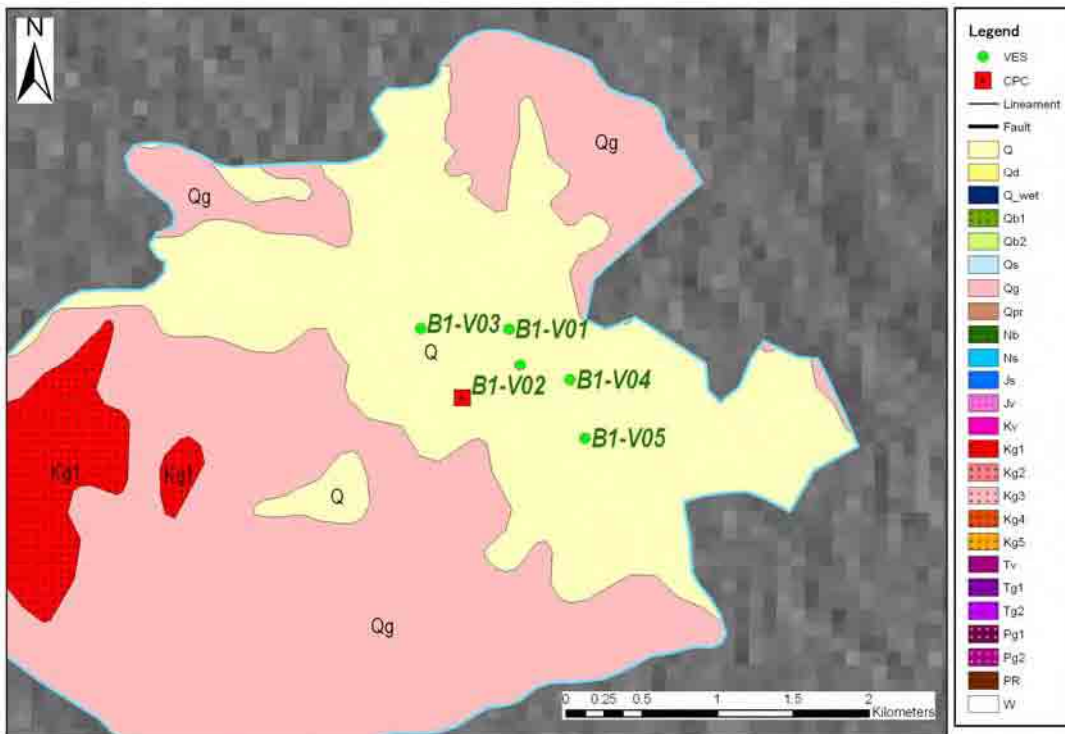
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at around 20 m in depth. There is concern about seawater intrusion.
- V02: Granite and its fracture section may appear from near the surface and at shallower than 10 m in depth with around 40 m in thick ness, respectively.
- V03: Granite with fracture may appear at around 10 m in depth. The boring core shows that granite with weathering from 15 m to 43 m in depth.
- V04: Granite with weathering may appear at shallower than 10 m in depth.
- V05: Granite and its fracture section may appear from near the ground surface and from shallower than 10 m to 100 m in depth, respectively.

Survey Points on Geology Map generated by JICA Study Team



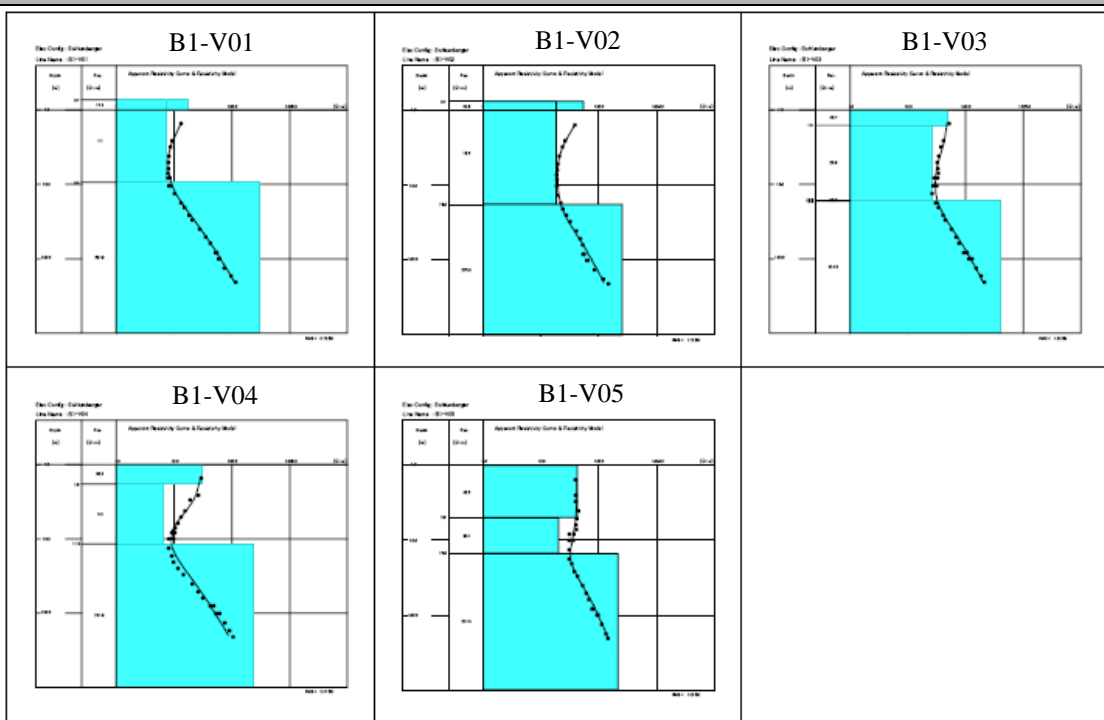
Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-1: Muong Man	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	B1-V01	Q (Js) /Ba	B1-V02	Q (Js) /Ba	B1-V03	Q (Js) /Ba
	B1-V04	Q (Js) /Ba	B1-V05	Q (Js) /Ba		

Results of the VES



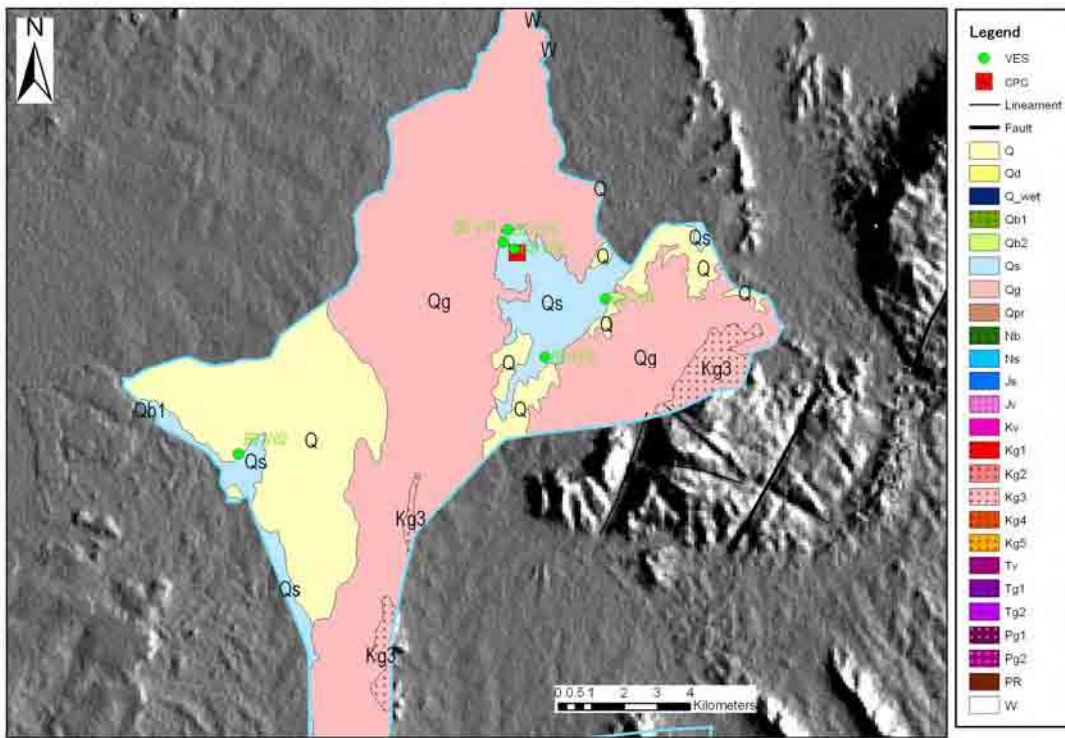
[Features of Apparent Resistivity]

- V01, V02, V03, V04: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V05: Apparent resistivity above 10 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.

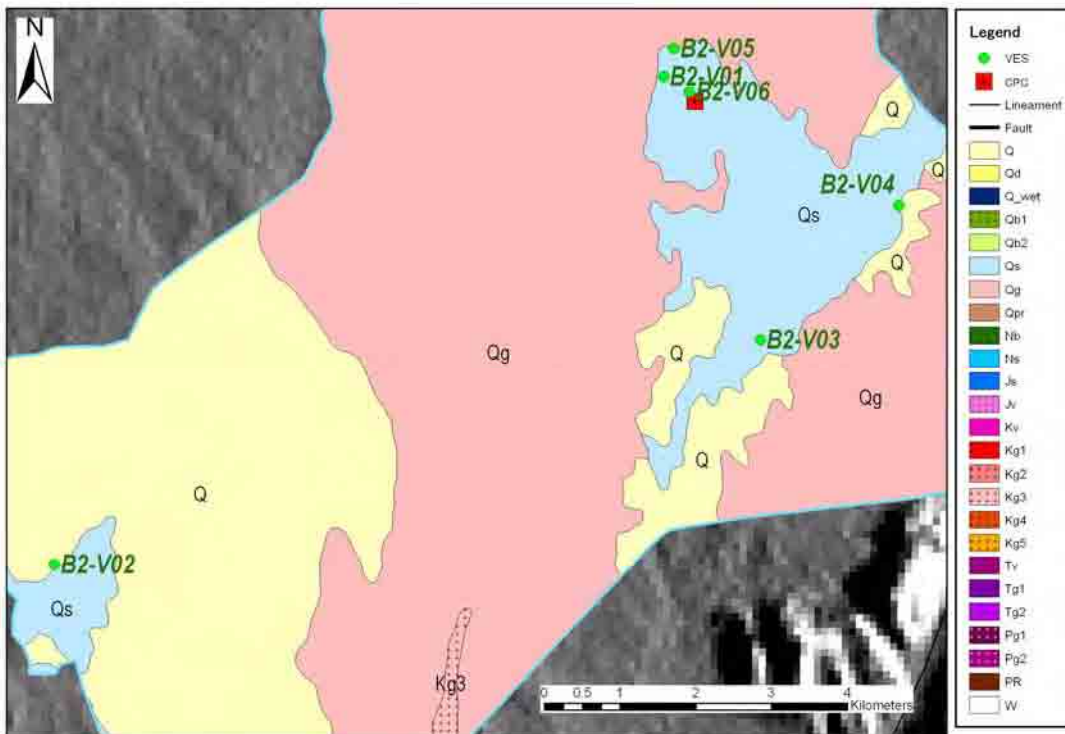
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V02, V03, V04: Sedimentary rock may appear at around 10 m to 20 m in depth.
- V05: Sedimentary rock may appear at around 10 m to 20 m in depth. The boring core shows that sedimentary rock (siltstone) with fracture appeared from 10 m to 35 m in depth.

Survey Points on Geology Map generated by JICA Study Team

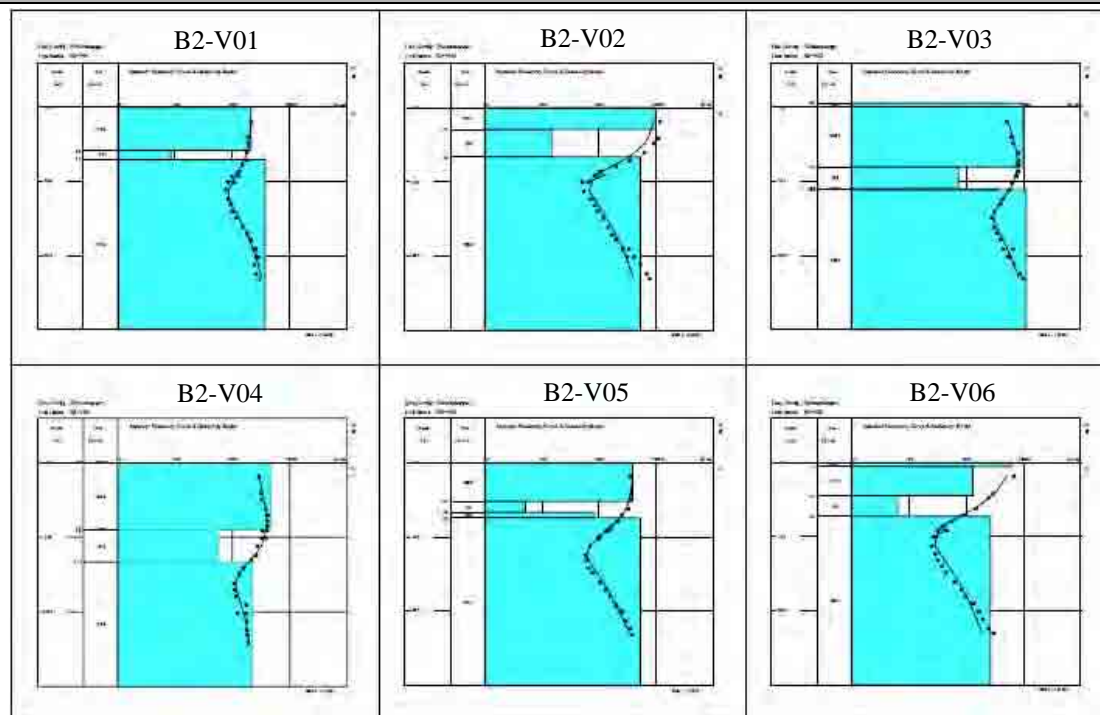


Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-2: Gia Huynh			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	B2-V01	Qg (Kg3) /An	B2-V02	Qs (Kg3) /An	B2-V03	Qg (Kg3) /An
	B2-V04	Qg (Kg3) /An	B2-V05	Qg (Kg3) /An	B2-V06	Qs (Kg3) /An

Results of the VES



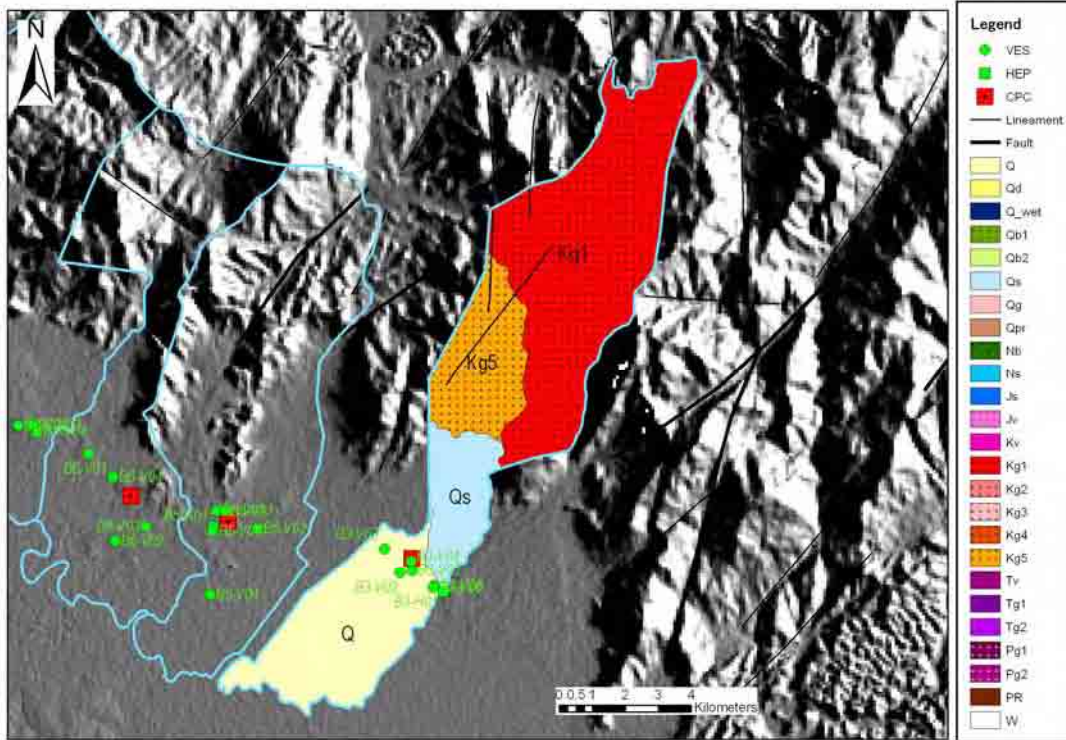
[Features of Apparent Resistivity]

- V01, V05: Apparent resistivity from ground surface to 15 m in depth and the below becomes low value and high value following the deeper depth of strata, respectively.
- V02, V06: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value steeply and high value following the deeper depth of strata, respectively.
- V03: Apparent resistivity around 20 m in depth shows the minimum value, and the fitting curve shows inverse-S shape.
- V04: Apparent resistivity change is similar to V03, and its value shows high in comparison with the same.

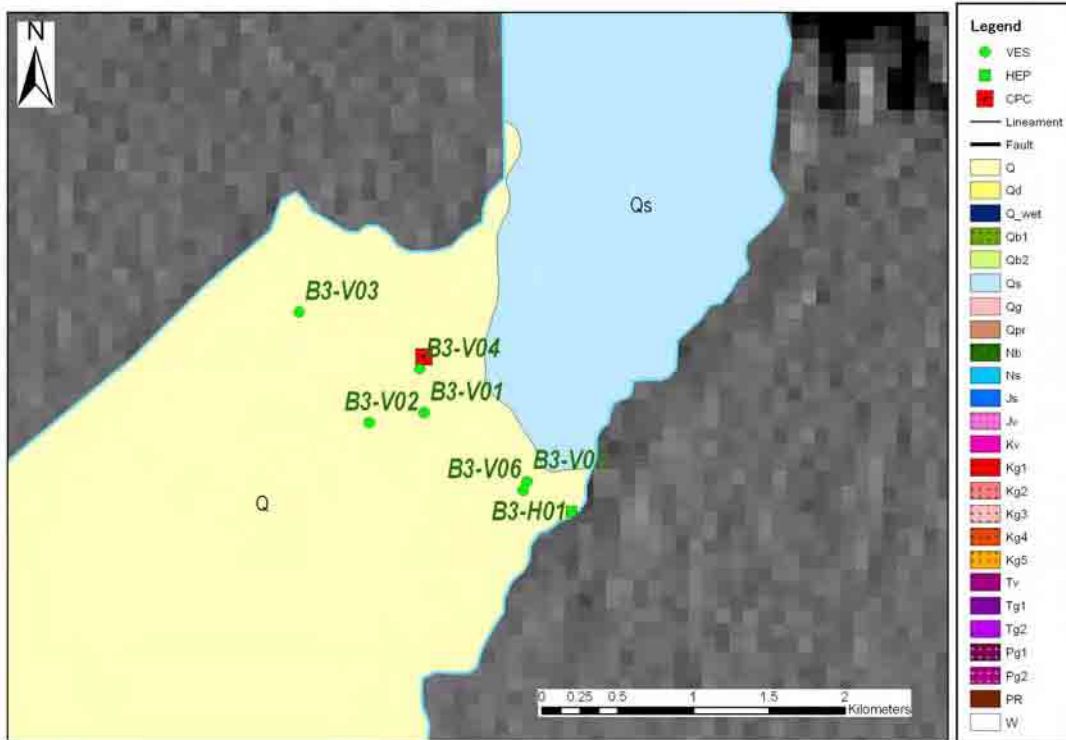
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at shallower than 10 m in depth. The boring core shows that granite with fracture appeared from 15 m to 20 m and from 30 m to 45 m in depth.
- V02, V06: Granite may appear at shallower than 10 m in depth.
- V03: Granite as a hard rock may appear at around 10 m in depth.
- V04: Granite may appear at around 20 m in depth.
- V05: Granite may appear at shallower than 10 m in depth.

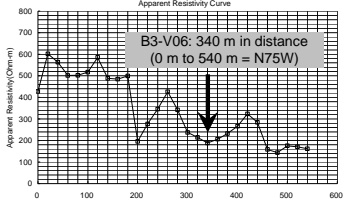
Survey Points on Geology Map generated by JICA Study Team



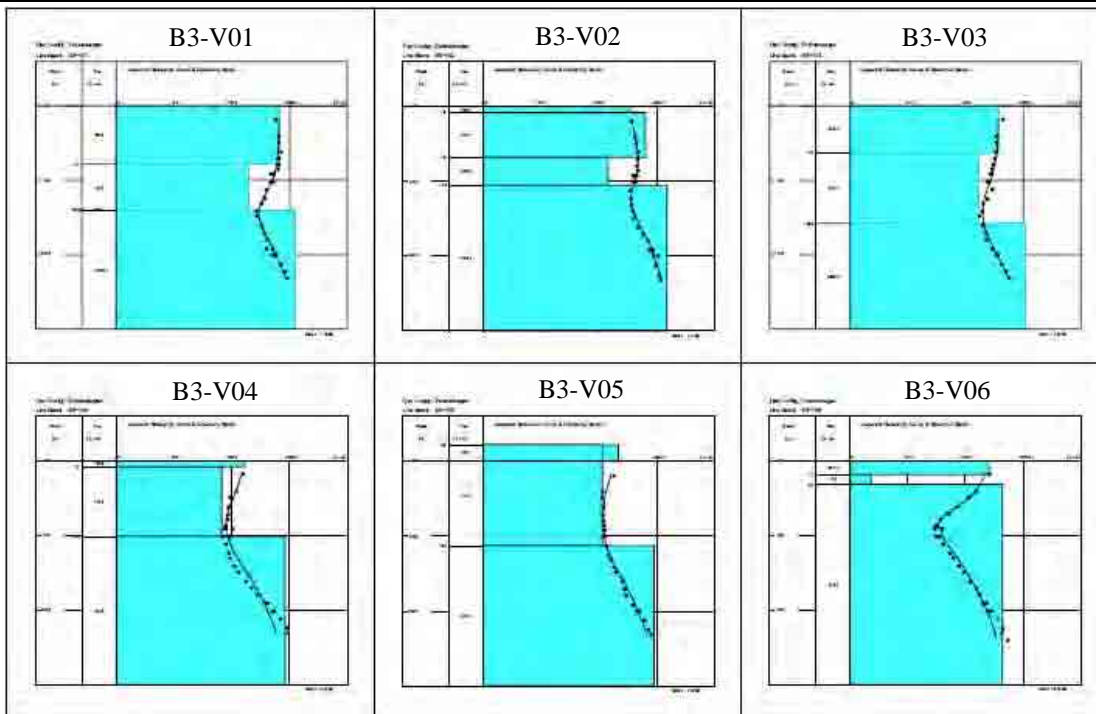
Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-3: Nghi Duc	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
	B3-V01	Q (Kg1) /An	B3-V02	Q (Kg1) /An	B3-V03	Q (Kg1) /An
	B3-V04	Q (Kg1) /An	B3-V05	Q (Kg1) /An	B3-V06	Q (Kg1) /An

Results of the VES



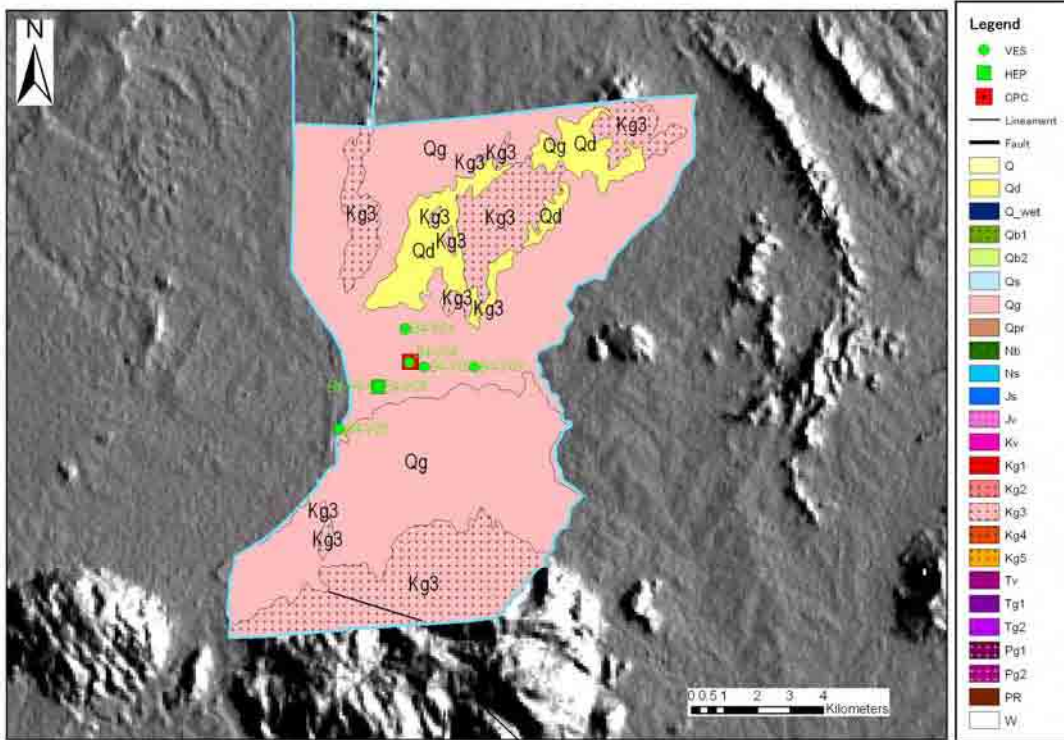
[Features of Apparent Resistivity]

- V01, V02, V03: Apparent resistivity from ground surface to 30 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V04, V05: Apparent resistivity above 10 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.
- V06: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value steeply and high value following the deeper depth of strata, respectively.

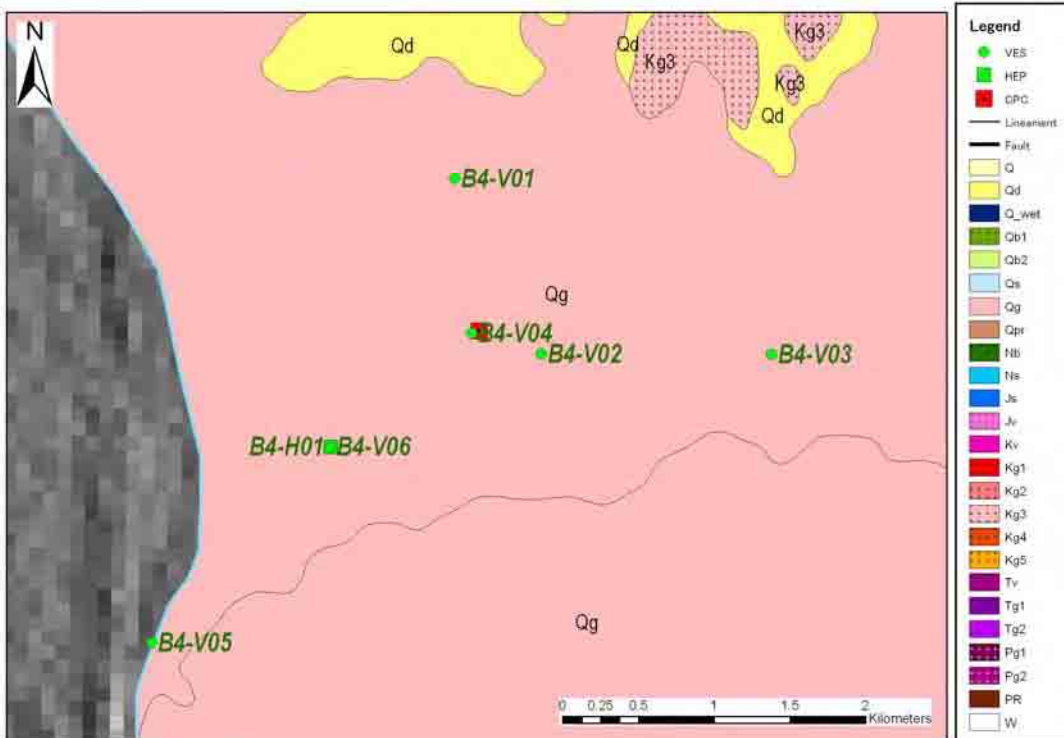
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01, V02, V03: Granite and its fracture section may appear from near the ground surface and at shallower than 10m in depth with around 10 m to 30 m in thickness, respectively.
- V04, V05: Granite may appear at around 10 m in depth.
- V06: Granite may appear from near the ground surface. The boring core shows that granite and its fracture section appeared from 8 m to 25 m in depth and from 25 m to 40 m in depth, respectively.

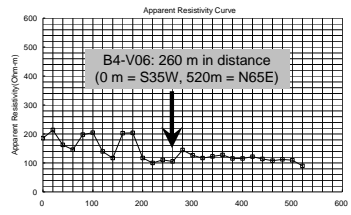
Survey Points on Geology Map generated by JICA Study Team



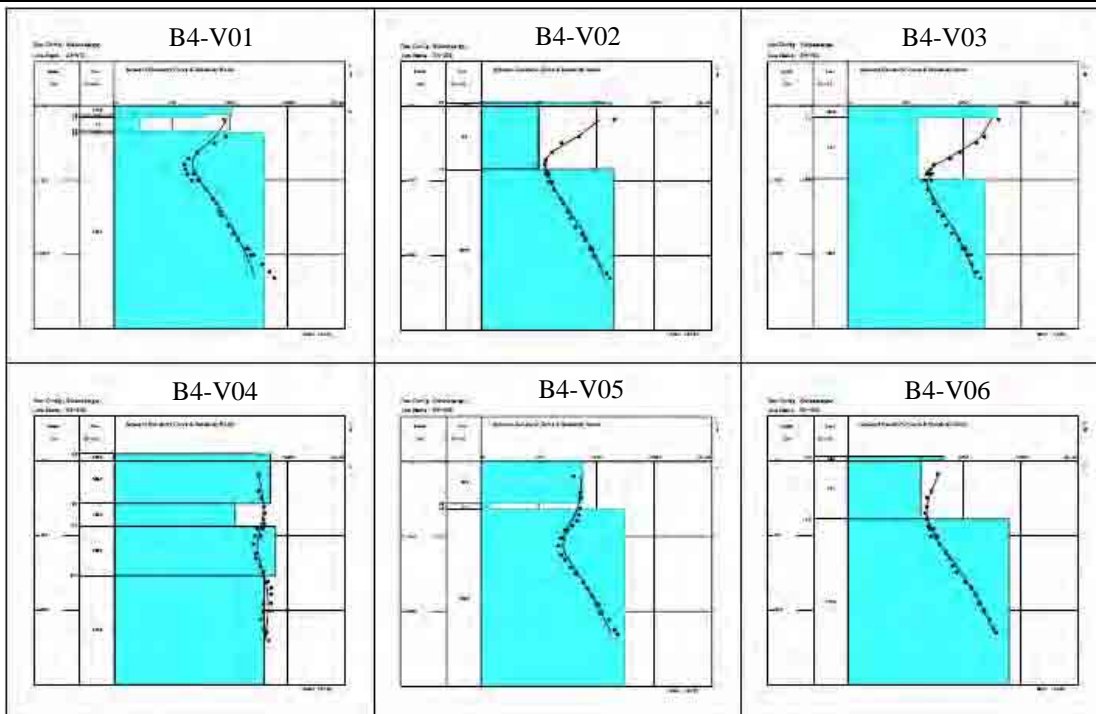
Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-4: Tan Duc	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
	B4-V01	Qg (Kg3) /An	B4-V02	Qg (Kg3) /An	B4-V03	Qg (Kg3) /An
	B4-V04	Qg (Kg3) /An	B4-V05	Qg (Kg3) /An	B4-V06	Qg (Kg3) /An

Results of the VES



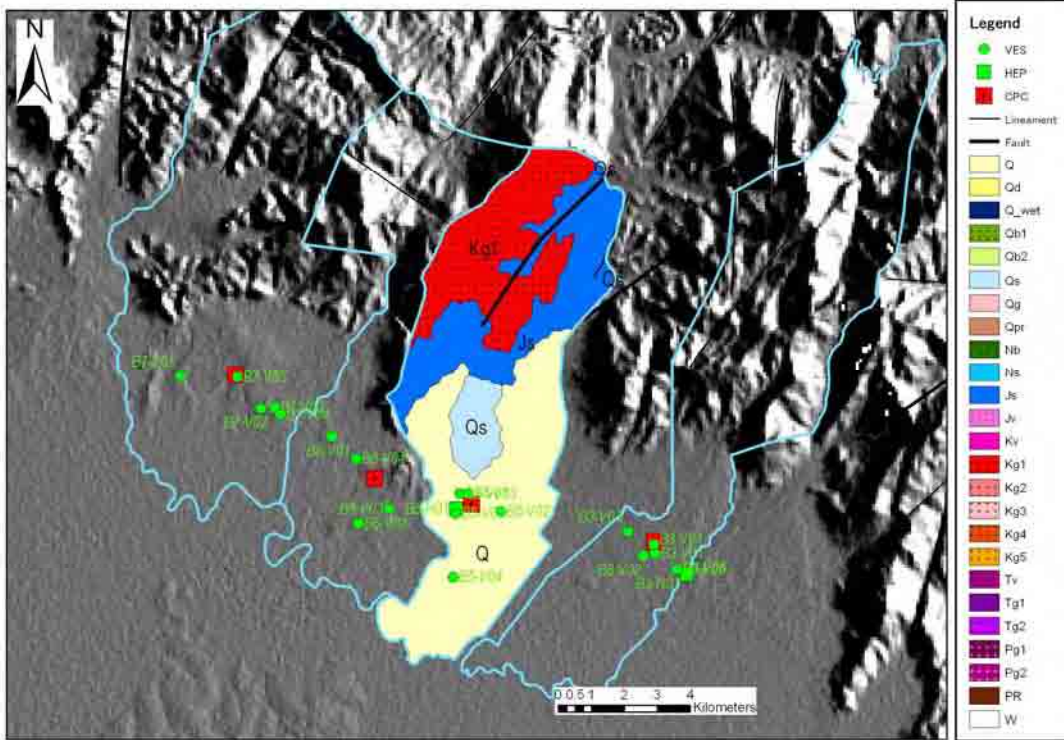
[Features of Apparent Resistivity]

- V01, V02, V03: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value steeply and high value following the deeper depth of strata, respectively.
- V04: Apparent resistivity change with depth is less.
- V05: Apparent resistivity from ground surface to 15 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V06: Apparent resistivity from ground surface to 6 m in depth and the below becomes slightly low value and high value following the deeper depth of strata, respectively.

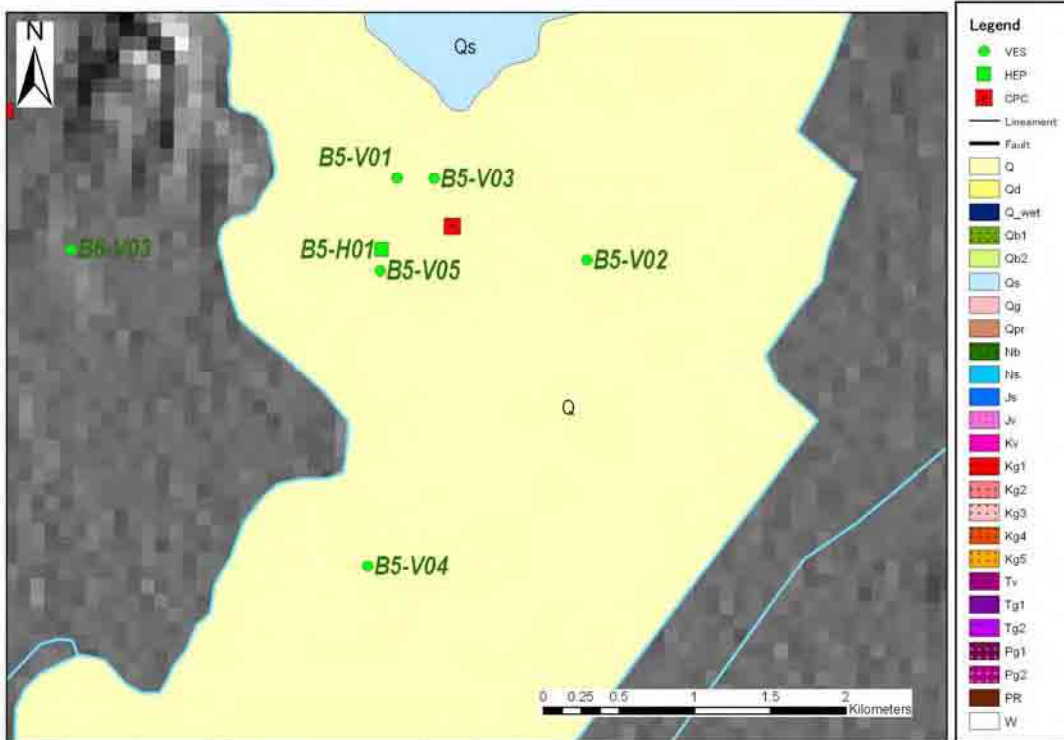
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear from near the ground surface.
- V02: Granite may appear at shallower than 10 m in depth.
- V03: Granite may appear at around 10 m in depth.
- V04: Granite and its fracture section may appear from near the ground surface and shallower than 10 m in depth with a few meters thickness, respectively.
- V05: Granite may appear at shallower than 10 m in depth. The boring core shows that granite with fracture appeared from 10 m to 20 m in depth and 25 m and 45 m in depth.
- V06: Granite may appear at shallower than 10 m in depth.

Survey Points on Geology Map generated by JICA Study Team



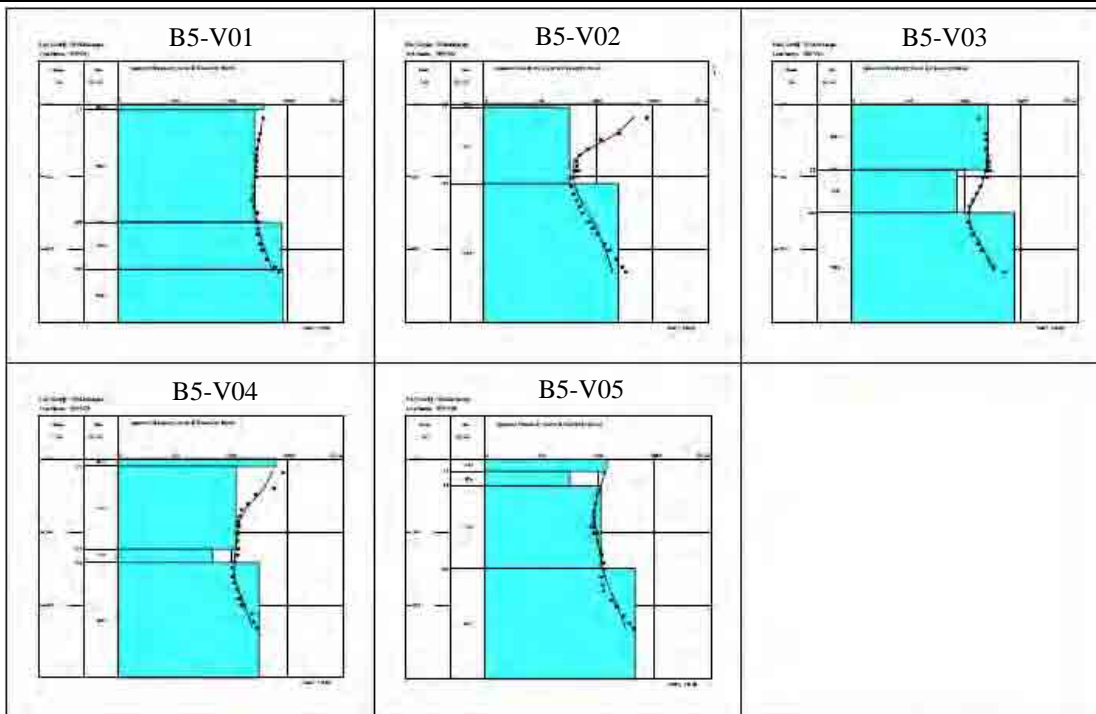
Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-5: Me Pu	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
<p>Apparent Resistivity Curve B5-V05: 140m in distance (0 m = N15W, 540 m = S75E)</p>	B5-V01	Q (Kg1) /An	B5-V02	Q (Kg1) /An	B5-V03	Q (Kg1) /An
	B5-V04	Q (Kg1) /An	B5-V05	Q (Kg1) /An		

Results of the VES



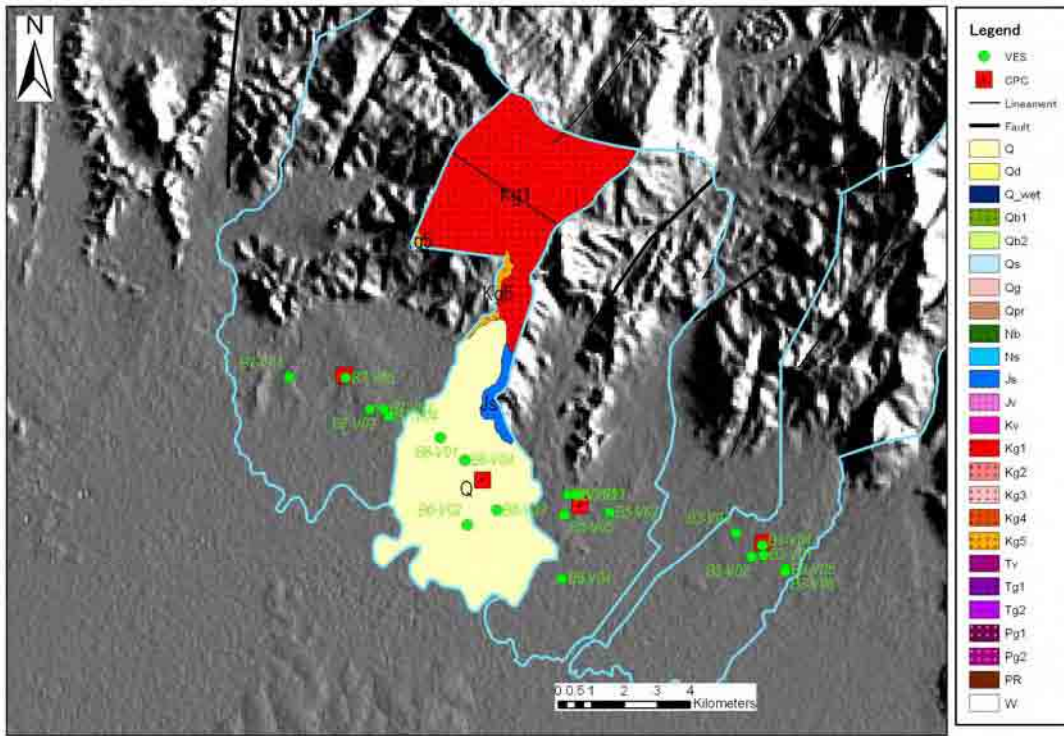
[Features of Apparent Resistivity]

- V01: Apparent resistivity above 40 m in depth and the below shows less change and becomes high value following the deeper depth of strata, respectively.
- V02: Apparent resistivity from ground surface to 10 m in depth and the below becomes low value steeply and high value following the deeper depth of strata, respectively.
- V03: Apparent resistivity from ground surface to 30 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.
- V04: Apparent resistivity from ground surface to 10 m in depth, from 10 m to 40 m in depth and the below becomes low value, shows less change and becomes high value following the deeper depth of strata, respectively.
- V05: Apparent resistivity change is similar to V01, and its value shows low in comparison with the same.

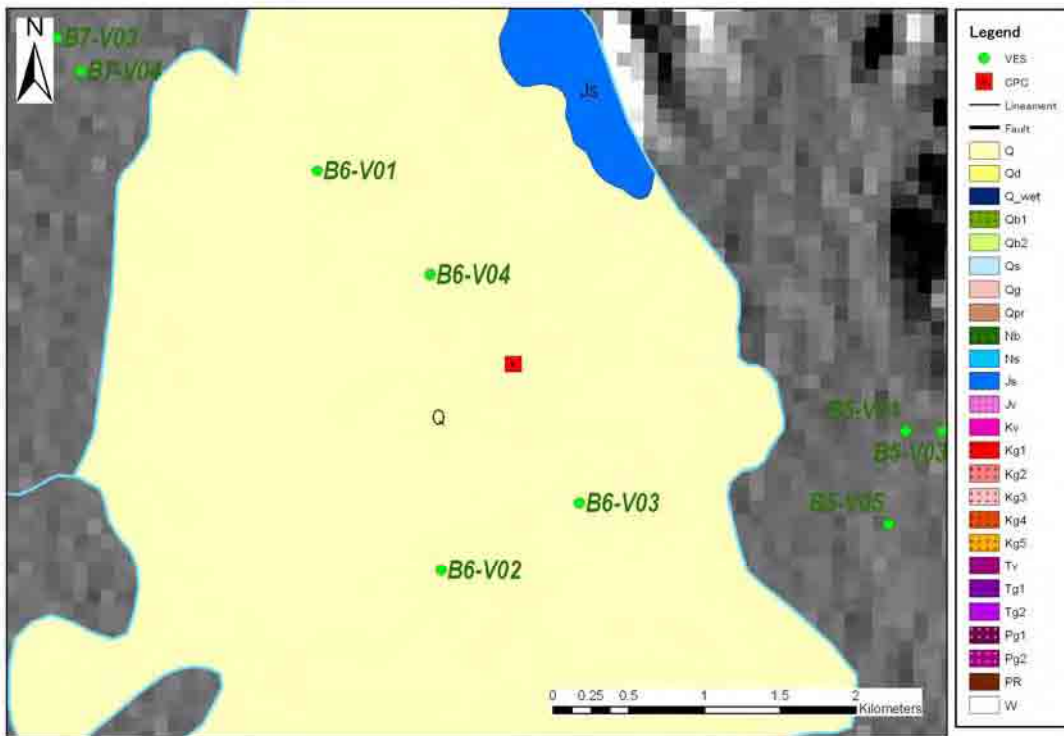
[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite with fracture may appear from near the ground surface to around 40 m in depth.
- V02: Granite may appear at around 10 m in depth.
- V03: Granite and its fracture section may appear from near the ground surface and around 10 m in depth with around 20 m in thickness, respectively.
- V04: Granite with fracture may appear from near the ground surface to around 30 m in depth.
- V05: Granite with weathering / fracture may appear from near the ground surface to around 30 m in depth.
The boring core shows that granite with weathering appeared from 8 m to 29 m in depth.

Survey Points on Geology Map generated by JICA Study Team

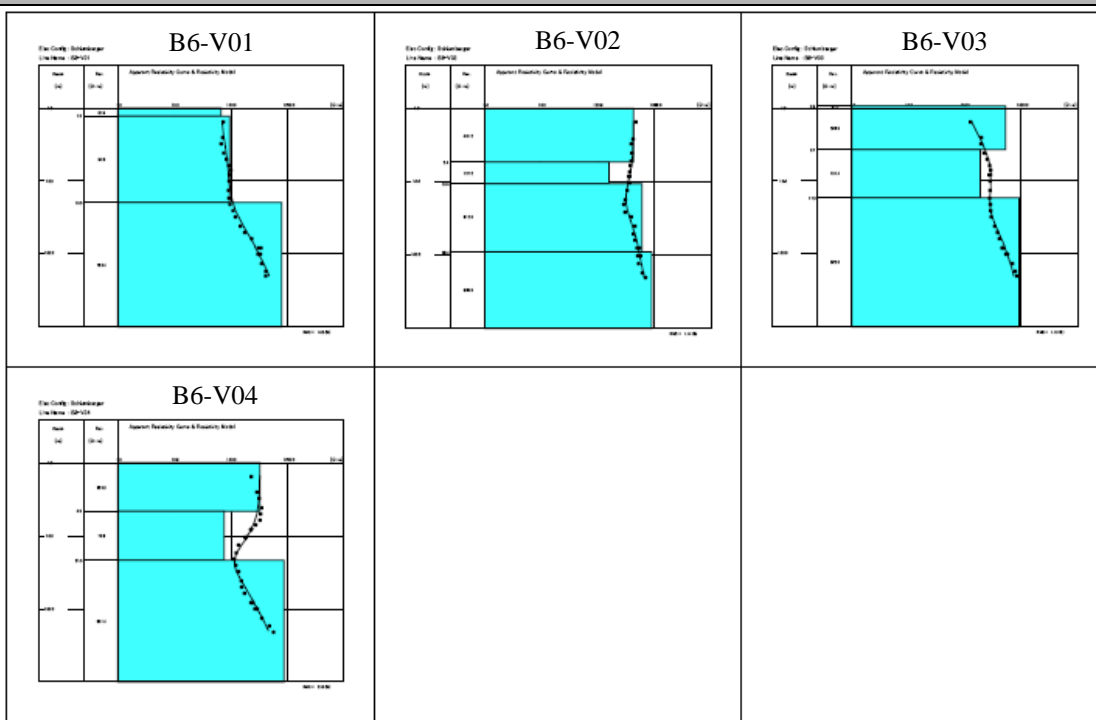


Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-6: Sung Nhon			2/2
Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	B6-V01	Q (Kgl) /An	B6-V02	Q (Kgl) /An	B6-V03	Q (Kgl) /An
	B6-V04	Q (Kgl) /An				

Results of the VES



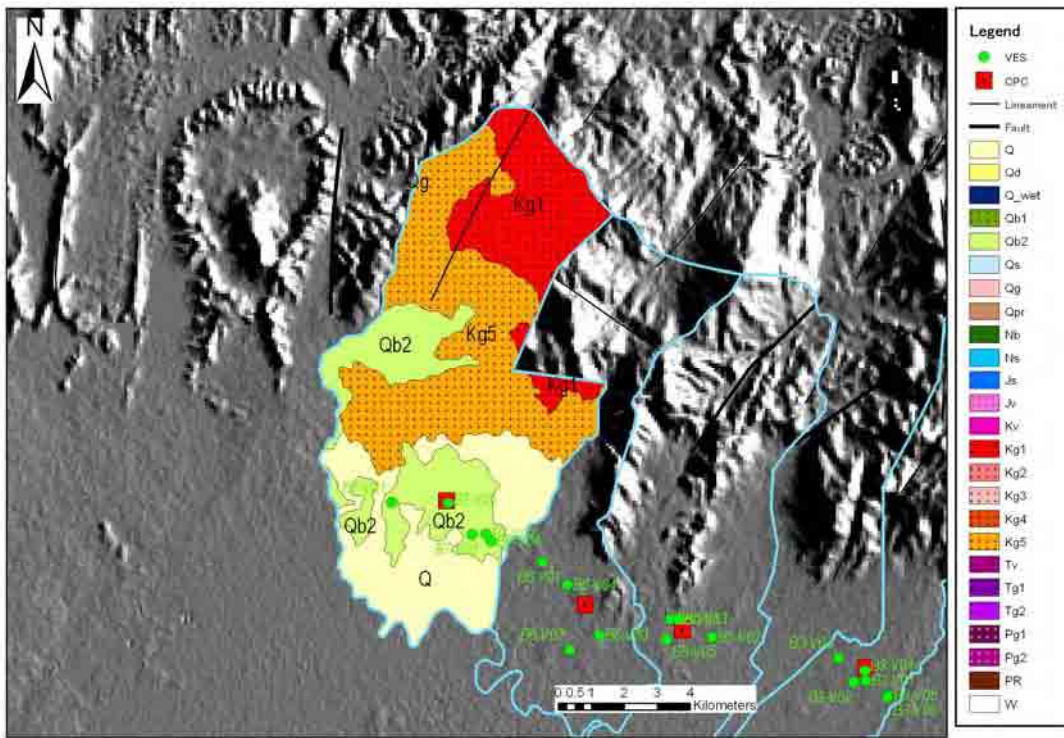
[Features of Apparent Resistivity]

- V01, V02, V03: Apparent resistivity becomes high value following the deeper depth of strata.
- V04: Apparent resistivity around 20 m in depth shows the minimum value, and the fitting curve shows inverse –S shape, respectively.

[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Granite may appear at around 20 m in depth.
- V02, V03: Granite and its fracture section may appear from near the ground surface and shallower than 10 m in depth with around 5 m to 15 m in thickness, respectively.
- V04: Granite and its fracture sections may appear from near the ground surface and at shallower than 10 m in depth with around 15 m in thickness, respectively. The boring core shows that granite with weathering and with fracture appeared from 3 m to 11 m in depth and from 11 m to 21 m in depth / from 28 m to 43 m in depth / from 57 m to 62m in depth, respectively.

Survey Points on Geology Map generated by JICA Study Team



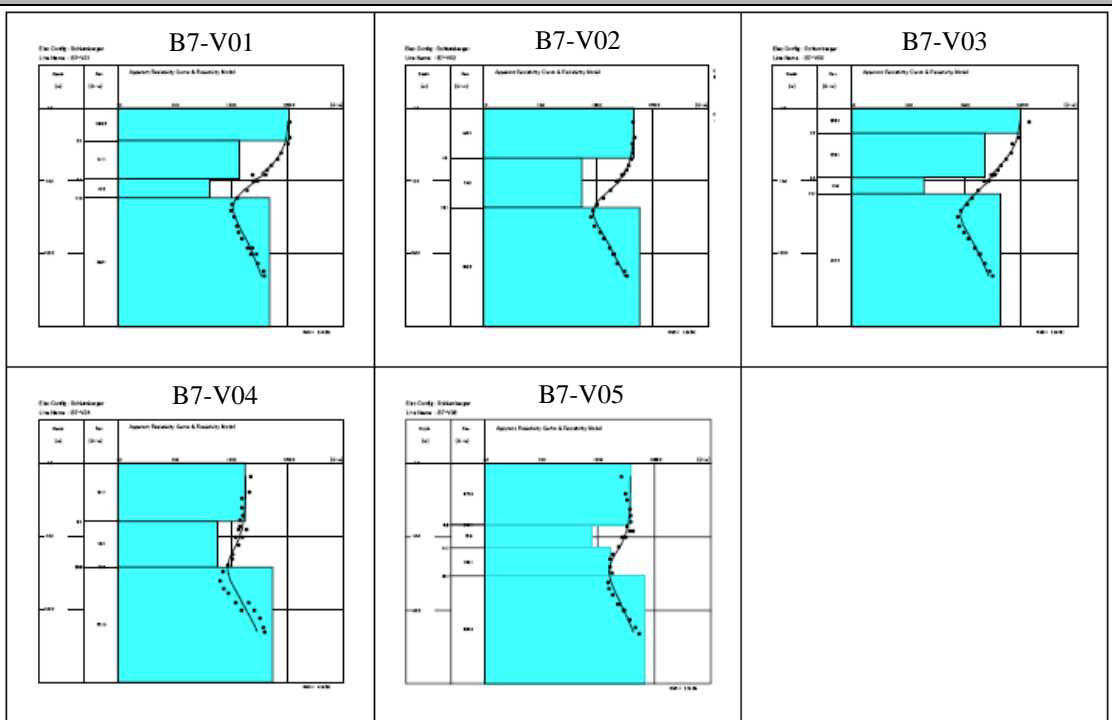
Enlargement of Location of the Survey Points



Province	Binh Thuan	Commune	B-7: Da kai	2/2
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Results of the HEP		Surface Geology (Bedrock)/Geology Layer at the VES Point				
None	B7-V01	Qb2 (Kg5) / β Q _{II-IV} +An	B7-V02	Qb2 (Kg5) / β Q _{II-IV} +An	B7-V03	Qb2 (Kg5) / β Q _{II-IV} +An
	B7-V04	Qb2 (Kg5) / β Q _{II-IV} +An	B7-V05	Qb2 (Kg5) / β Q _{II-IV} +An		

Results of the VES



[Features of Apparent Resistivity]

- V01, V02, V03, V04, V05: Apparent resistivity from ground surface to 20 m – 30 m in depth and the below becomes low value gently and high value following the deeper depth of strata, respectively.

[Estimation of Bedrock / Seawater Intrusion Conditions based on Resistivity Model]

- V01: Basalt, alteration granite and granite may appear from near the ground surface to around 10 m in depth, the below with around 10 m in thickness and at around 20 m in depth, respectively. The boring core shows that basalt, alteration granite and granite with fracture appeared from 3 m to 10 m in depth, from 10 m to 18 m in depth and from 18 m to 30 m in depth, respectively.
- V02, V04, V05: Basalt and granite may appear at shallower than 10 m in depth with around 20 m in thickness and at around 20 m to 30 m in depth, respectively.
- V03: Basalt, alteration granite and granite may appear from near the ground surface to around 10 m in depth, the below with around 5 m in thickness and at around 15 m in depth, respectively.