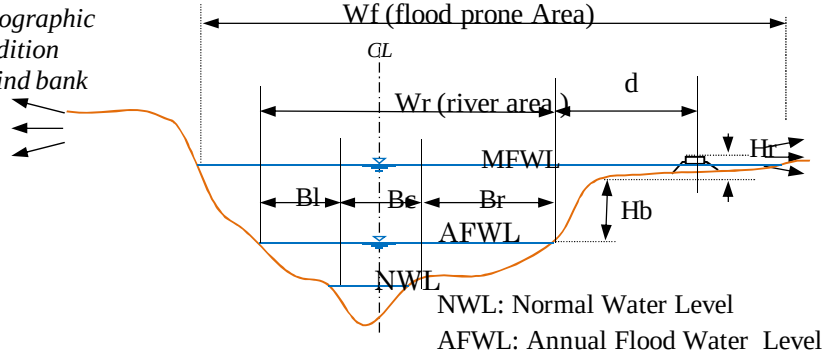
Inventory Sheet for River/Channel

Station:From KM305 to KM306			Sheet No.: CH- KM 305
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 4, 2014
1-4	Location	Lat	6º 43′ 38″ 05‴
1-5		Long	36º 50′ 33″ 85‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		1 Bridge
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 128 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 40 m
2-18	Damaged Record, if any (year/month)		The bridge of right side tributary had been broken by flood in 2010. The bridge had been rebuilt.
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



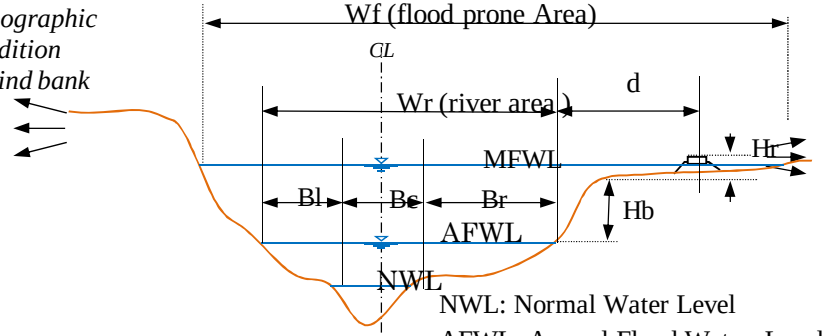
Inventory Sheet for River/Channel

Station:From KM306 to KM307			Sheet No.: CH- KM 306
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 4, 2014
1-4	Location	Lat	6º 43′ 05″ 07‴
1-5		Long	36º 50′ 24″ 49‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 112 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 75 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



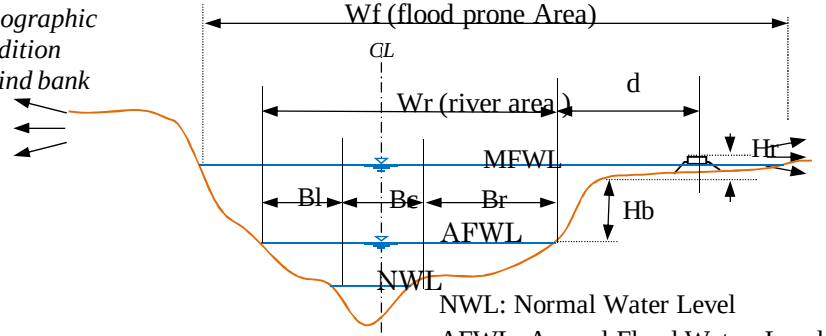
Inventory Sheet for River/Channel

Station: From KM307 to 308			Sheet No.: CH- KM 307
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 4, 2014
1-4	Location	Lat	6º 42′ 59″ 86‴
1-5		Long	36º 50′ 22″ 87‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 77 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 130 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



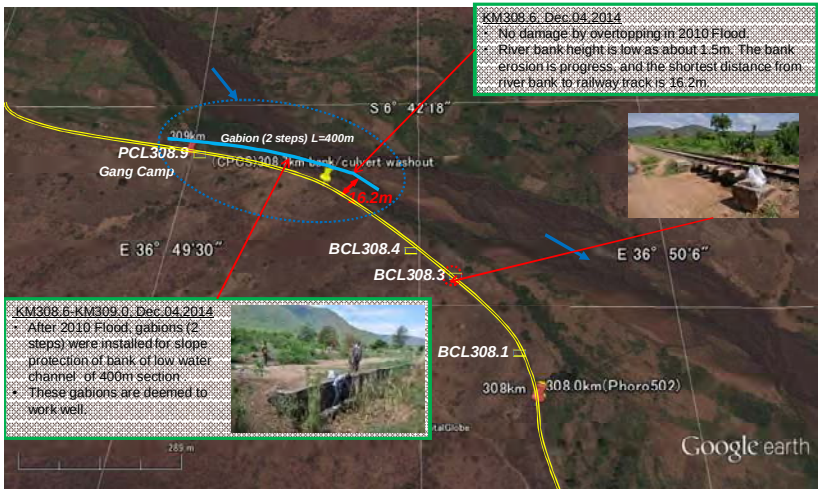
Inventory Sheet for River/Channel

Station: From KM308-KM309			Sheet No.: CH-308
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014 1027
1-4	Location	Lat	06° 42' 26.1"
1-5		Long	36° 49' 43.0"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		L=400m, Km308.5-Km308.9
2-2	Nos. of River		Gabion 2steps
2-3	River Channel Alignment		Straight, water hit area
2-4	River Cross Section		compund
2-5	River Width		Wf: m, Wr: approx.150m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hb: 1.5-2.5 m, Hr=1.1m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	Grass & trees
2-11	Estimated Flow Velocity		normal: 0.5 m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		~~Riverside forests, Sandbar~~, Pool, shoal, fishes, etc
2-13	Land Use		Cultivation of onion
2-14	Soil Type		Black
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d= 16.2m@Km308.6
2-18	Damaged Record, if any (year/month)	After damaded by 2010 flood, 2 steps of gabions were constructed.	
2-19	Reason of	Bank erosion	
2-20	Pattern of Riverbed	Rising of riverbed in long distance	

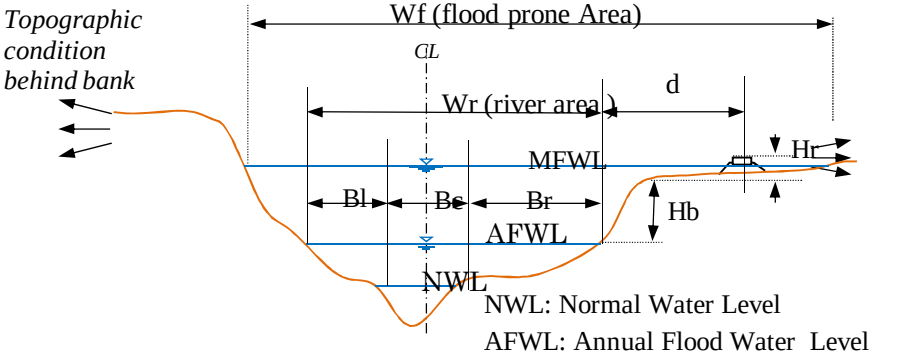
Photo Upstream

Photo Downstream

Location



Cross Section



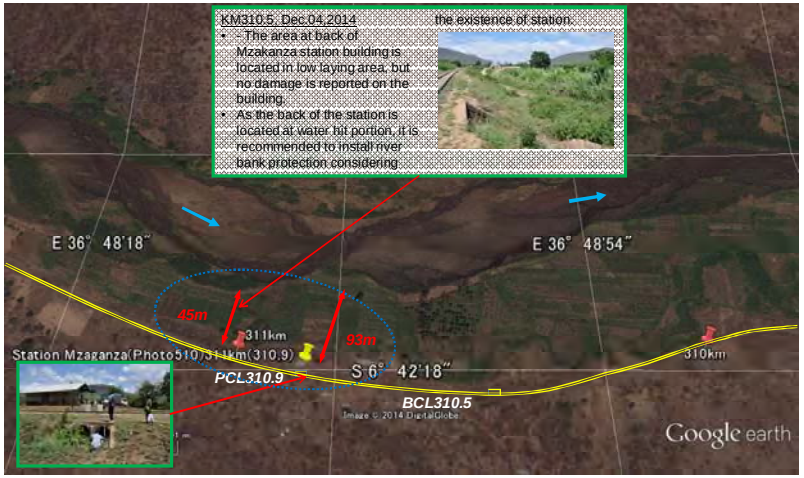
Inventory Sheet for River/Channel

Station: From KM310.9			Sheet No.: CH-310
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014 1140
1-4	Location	Lat	
1-5		Long	
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		L=200m, KM310.9-311.1
2-2	Nos. of River		None
2-3	River Channel Alignment		Straight, water hit area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 1.3-4.3 m
2-9		Side Slope	Sl: 1v: 3.0 , Sr: 1v:
2-10		Vegetation	Grass
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		Cultivation of onion
2-14	Soil Type		Black
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		Station & residential houses
2-17	Location of Railway		d= 21m@Km312.4
2-18	Damaged Record, if any (year/month)	Bank erosion is progressive, but no serious fllod damage is repoted.	
2-19	Reason of		
2-20	Pattern of Riverbed	Rising of riverbed in long distance	

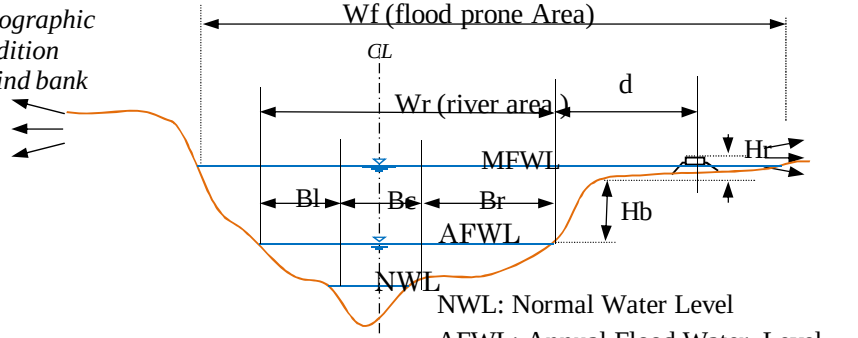
Photo Upstream

Photo Downstream

Location



Cross Section



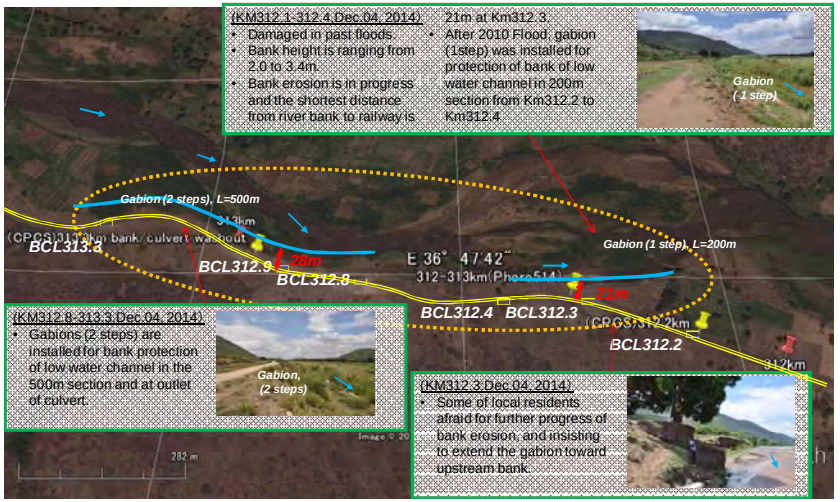
Inventory Sheet for River/Channel

Station: From KM312.1 to 312.4			Sheet No.: CH-312.1
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014
1-4	Location	Lat	06° 42' 00.7" to 06°42' 00.3"
1-5		Long	36° 47' 54.7" to 36°47' 45.7"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		L=300m, KM312.1-312.4
2-2	Nos. of River		Gabion, 1step
2-3	River Channel Alignment		Meandering
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: approx.200 m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	sand
2-8	River Bank	Bank Height	Hl: 2.0 m
2-9		Side Slope	Sl: 1v: 2.0 , Sr: 1v:
2-10		Vegetation	grass
2-11	Estimated Flow Velocity		normal: 0.5 m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		Brown
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		residential houses on hill
2-17	Location of Railway		d= 21m@Km312.4
2-18	Damaged Record, if any (year/month)		Progress of erosion to railway side
2-19	Reason of		bank erosion
2-20	Pattern of Riverbed		

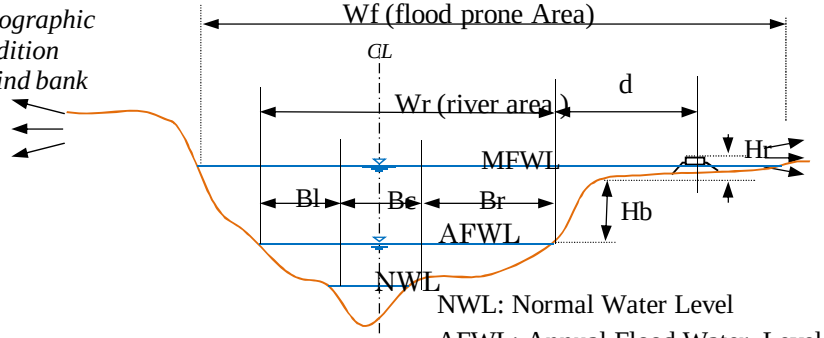
Photo Upstream

Photo Downstream

Location



Cross Section



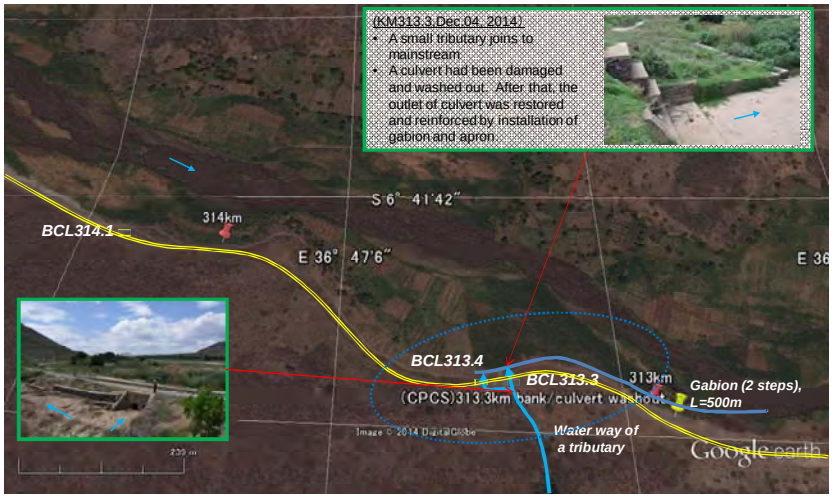
Inventory Sheet for River/Channel

Station: From KM312.8 to 313.3			Sheet No.: CH-312.8
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014 1310
1-4	Location	Lat	06° 42' 00.0" to 59.6"
1-5		Long	36° 47' 31.1" to 28.8"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		5--m, Km312.8-313.3
2-2	Nos. of River		Gabion(2 steps), Culvert (2 nos.)
2-3	River Channel Alignment		Meandering, water hit aera
2-4	River Cross Section		
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: m, Br:3.0 m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	none
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		
2-17	Location of Railway		
2-18	Damaged Record, if any (year/month)		Gabions (2 steps) are installed for bank protection of low water channel in the 500m section and at outlet of culvert.
2-19	Reason of		
2-20	Pattern of Riverbed		

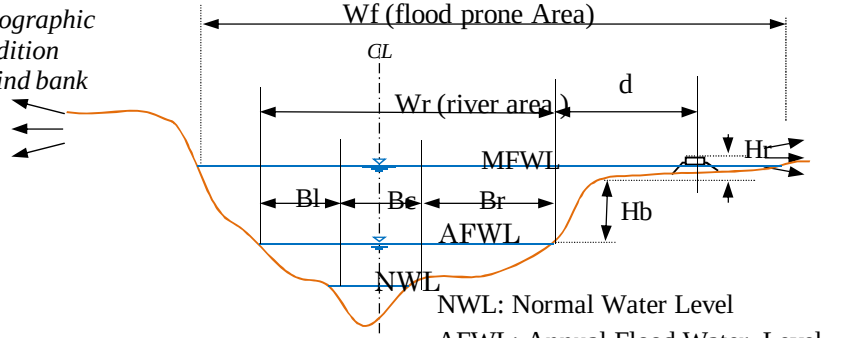
Photo Upstream

Photo Downstream

Location



Cross Section



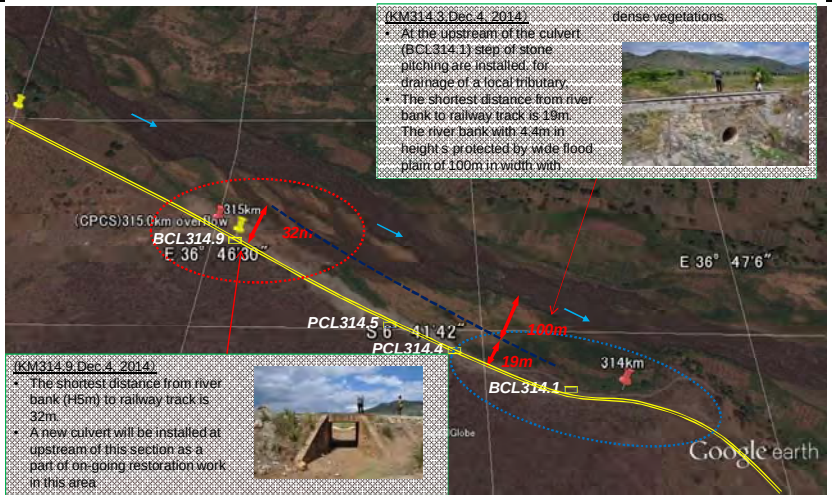
Inventory Sheet for River/Channel

Station: From KM314.3			Sheet No.: CH-314.3
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014 1410
1-4	Location	Lat	06° 41' 44.0"
1-5		Long	36° 46' 47.1"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River		
2-3	River Channel Alignment		Straight, water hit area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: approx.500m, Wr: m Bl: m, Bc: m, Br: 100m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hr: 1.4m, Hb=3.0m
2-9		Side Slope	Sl: 1v: 2.0 , Sr: 1v:
2-10		Vegetation	grass
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		black
2-15	Topography		left: ← ,right ↗
2-16	Structures/Houses, road		none
2-17	Location of Railway		d=19m@Km314.3
2-18	Damaged Record, if any (year/month)		none
2-19	Reason of		
2-20	Pattern of Riverbed		Local sediment deposition

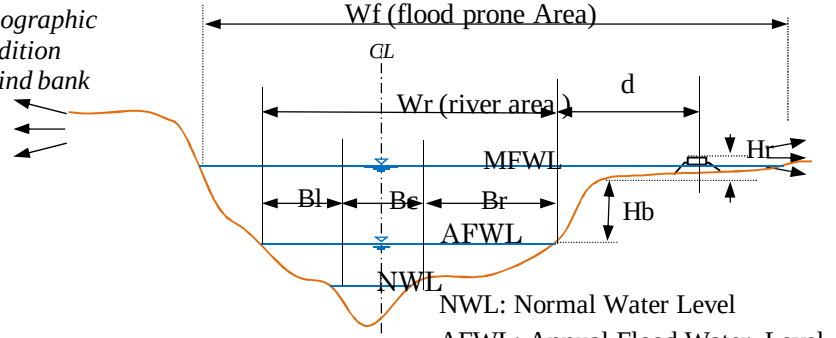
Photo Upstream

Photo Downstream

Location



Cross Section



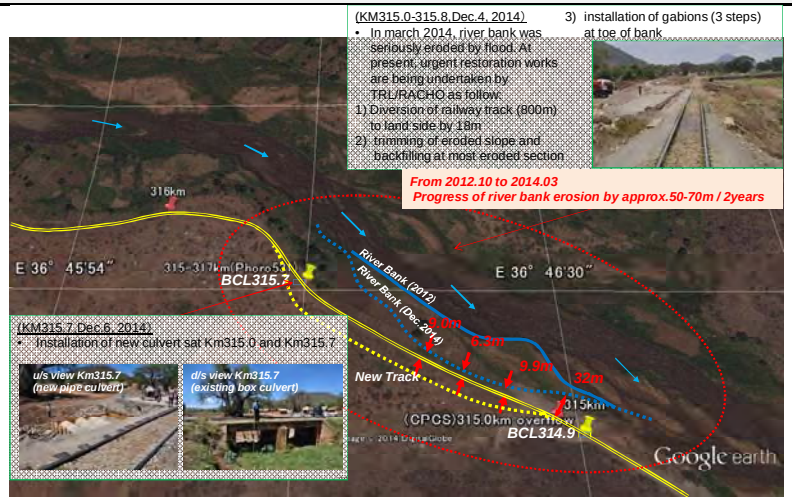
Inventory Sheet for River/Channel

Station: From KM315 to KM316			Sheet No.: CH-315
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 4, 2014
1-4	Location	Lat	
1-5		Long	
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		800m, Km315.0-315.8
2-2	Nos. of River		Culvert (1)
2-3	River Channel Alignment		meandering
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hr: 3 m, Hb: 3 m
2-9		Side Slope	Sl: 1v: 2 , Sr: 1v:
2-10		Vegetation	grass
2-11	Estimated Flow Velocity		normal: 0.6 m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		laterite
2-15	Topography		left: ← ,right ↗
2-16	Structures/Houses, road		none
2-17	Location of Railway		d=32m@KM315.0, 6.3m@Km315.2
2-18	Damaged Record, if any (year/month)	Previously damaged. In march 2014, river bank was seriously eroded by flood. At present, urgent restoration works with diversion are being undertaken by TRL/RACHO.	
2-19	Reason of	Serious bank erosion	
2-20	Pattern of Riverbed	Rising of riverbed in long distance	

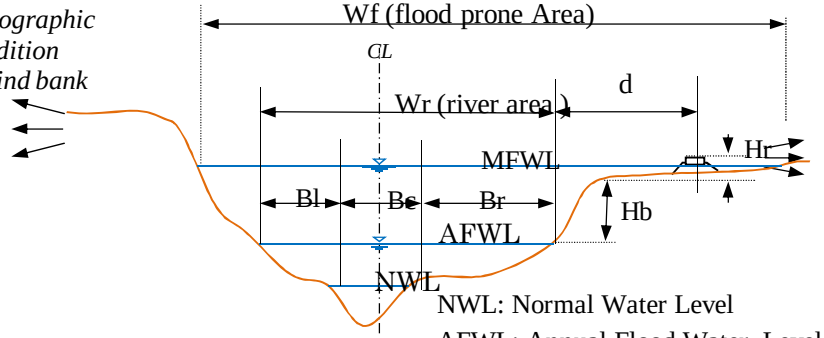
Photo Upstream

Photo Downstream

Location



Cross Section



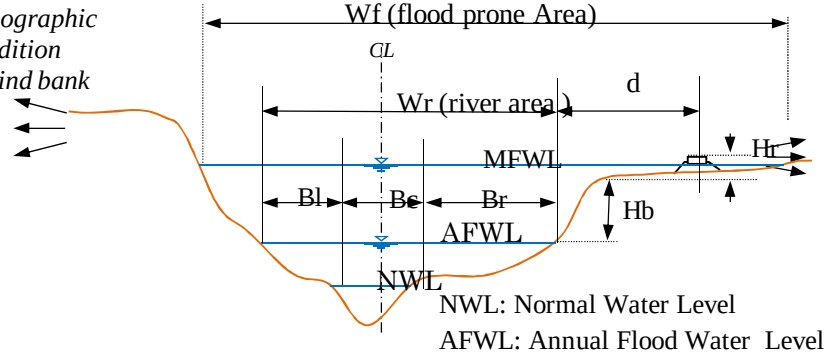
Inventory Sheet for River/Channel

Station:From KM325 to KM326			Sheet No.: CH- KM 325
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 38′ 31″ 90‴
1-5		Long	36º 42′ 39″ 37 ‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		2 culverts
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 35 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		Residence
2-17	Location of Railway		d = 600 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



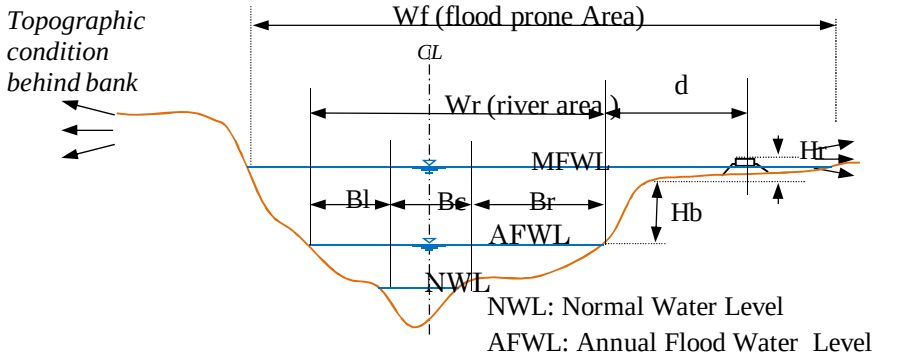
Inventory Sheet for River/Channel

Station:From KM326 to KM327			Sheet No.: CH- KM 326
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 38′ 11″ 84‴
1-5		Long	36º 41′ 58″ 76‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		1 culvert
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 68 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 310
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



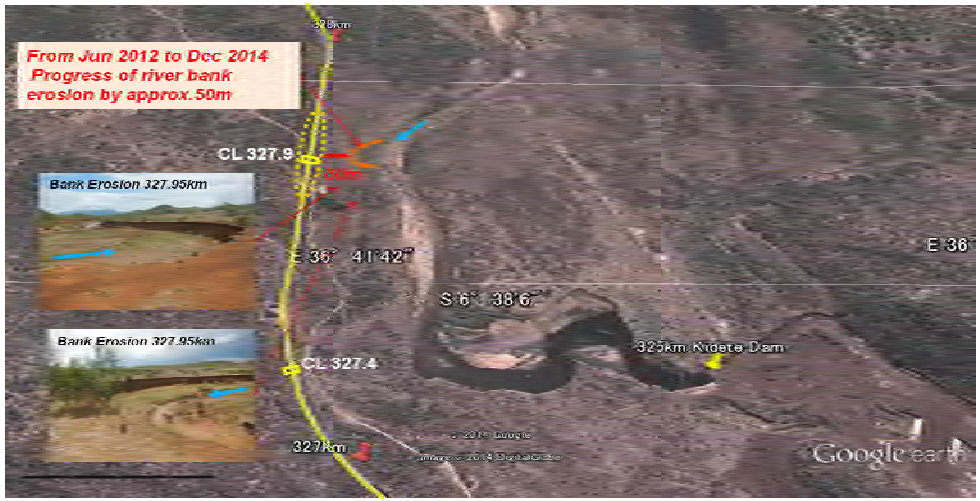
Inventory Sheet for River/Channel

Station:From KM327 to KM328			Sheet No.: CH- KM 327
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 37′ 53″ 90‴
1-5		Long	36º 41′ 40″ 94‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		2 culverts
2-3	River Channel Alignment		Meandering , Water Hit area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 50 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 8 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 60 m
2-18	Damaged Record, if any (year/month)		Notable riverbank corrosion has been occurred at 327.95 km point of the water colliding front. About 50m corrosion has been advancing during two years and a half between present
2-19	Reason of		Bank Erosion
2-20	Pattern of Riverbed		

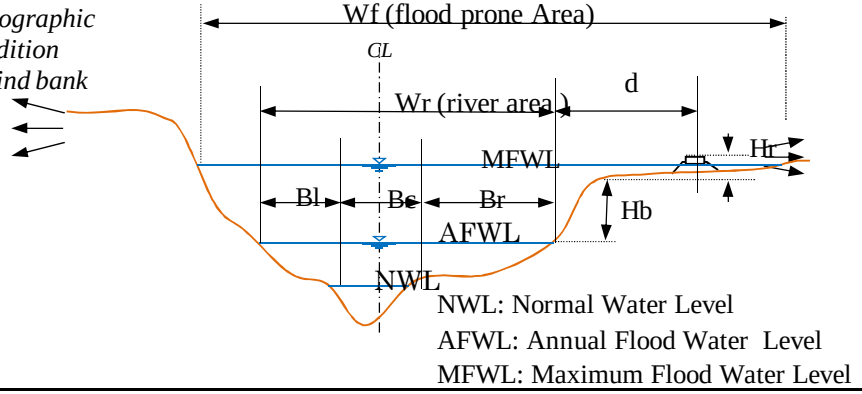
Photo Upstream

Photo Downstream

Location



Cross Section



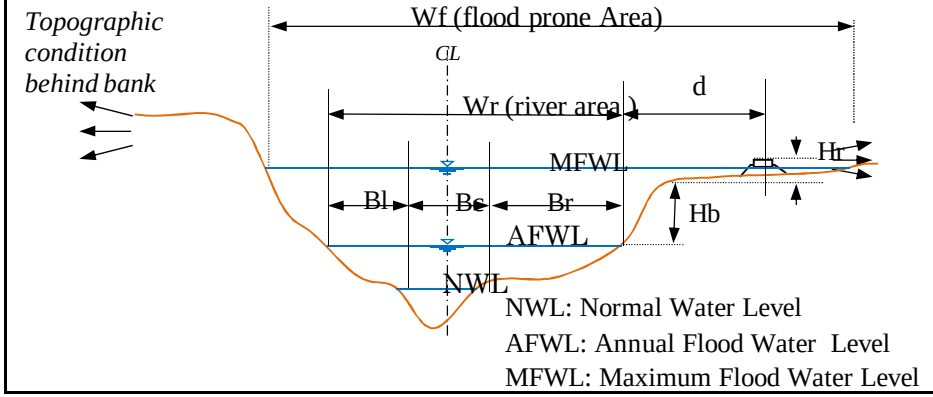
Inventory Sheet for River/Channel

Station:From KM328 to KM329			Sheet No.: CH- KM 328
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 37′ 32″ 48‴
1-5		Long	36º 41′ 33″ 46‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		1 culvert
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 58 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forest, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 110 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



Inventory Sheet for River/Channel

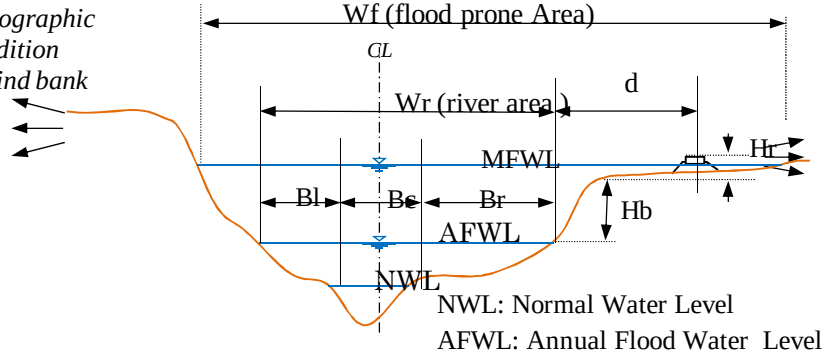
Station: From KM329 to KM330			Sheet No.: CH- KM 329
1. General			
1-1	Name of Inspector		T. Kawaguchi, Hussein, Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 37′ 20″ 29‴
1-5		Long	36º 40′ 47″ 79‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 20 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 2.5 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forest, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 22m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream

Photo Downstream

Location

Cross Section



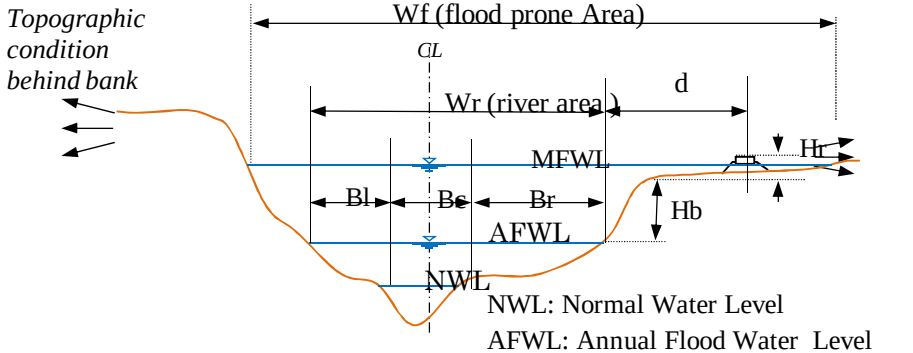
Inventory Sheet for River/Channel

Station: From KM330 to KM331			Sheet No.: CH- KM 330
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 37′ 13″ 79‴
1-5		Long	36º 40′ 34″ 60‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		
2-4	River Cross Section		
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 47 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section

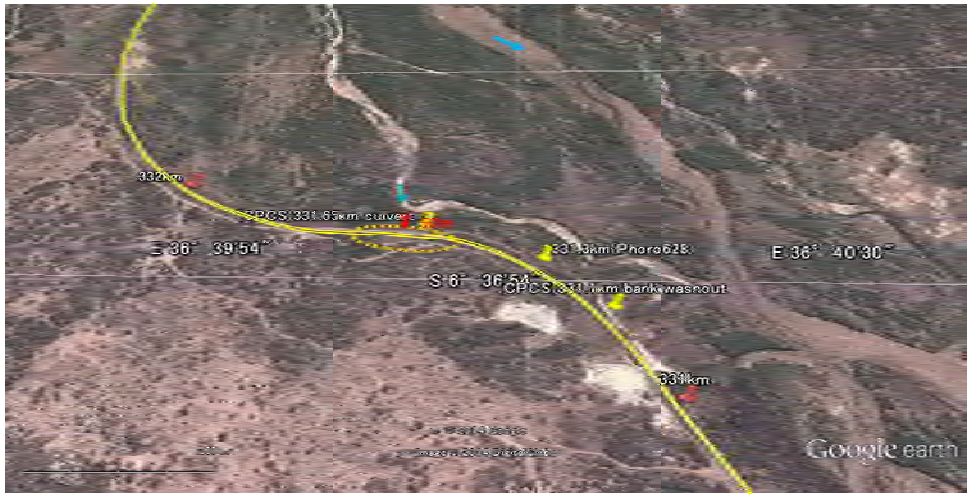


Inventory Sheet for River/Channel

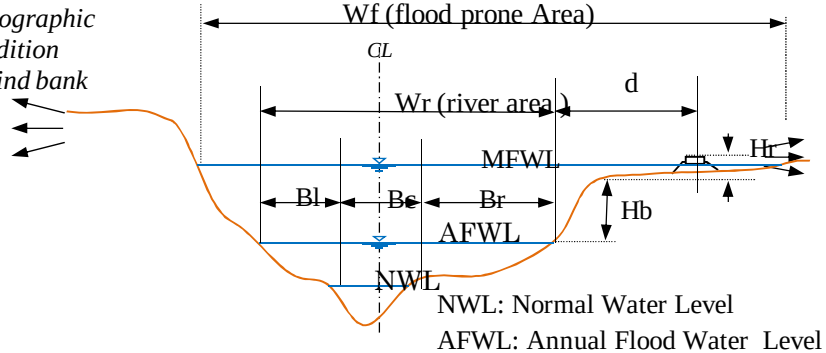
Station:From KM331 to KM332			Sheet No.: CH- KM 331
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 36′ 48″ 50‴
1-5		Long	36º 40′ 05″ 68‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 18 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 50 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location



Cross Section



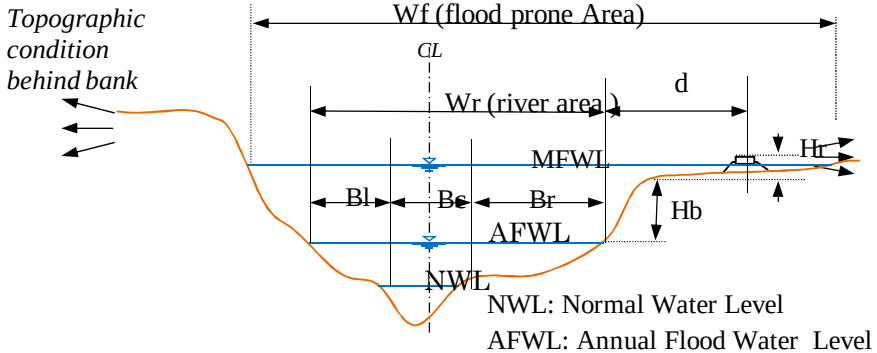
Inventory Sheet for River/Channel

Station:From KM332 to KM333			Sheet No.: CH- KM 332
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 3, 2014
1-4	Location	Lat	6º 36′ 17″ 68‴
1-5		Long	36º 39′ 50″ 00‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 30 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		Cultivation
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 80 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



Inventory Sheet for River/Channel

Station: From KM337 to KM338			Sheet No.: CH-337
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 2, 2014 14:00
1-4	Location	Lat	06° 34' 37.60"
1-5		Long	36° 38' 43.2"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		500m (Km337.2-337.7)
2-2	Nos. of River		None
2-3	River Channel Alignment		meandering, water hit area
2-4	River Cross Section		compound section
2-5	River Width		Wf: m, Wr: approx. 200 m Bl: m, Bc: 50 m, Br: 0 m
2-6	Riverbed Slope		Gentle (i=1/xxx)
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hb: 3.0 m, Hr=1.5m
2-9		Side Slope	Sl: 1v: , Sr: 1v: (vertical)
2-10		Vegetation	none
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		Laterite
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d= 18 m@337.5
2-18	Damaged Record, if any (year/month)		Frequently damaged in tha past, and divertsion of track were carried out many times. 2014: bank erosion
2-19	Reason of		Bank erosion, Overflow, Sliding,
2-20	Pattern of Riverbed		Rising of riverbed in long distance

Photo Upstream

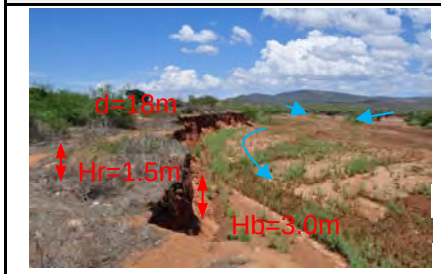
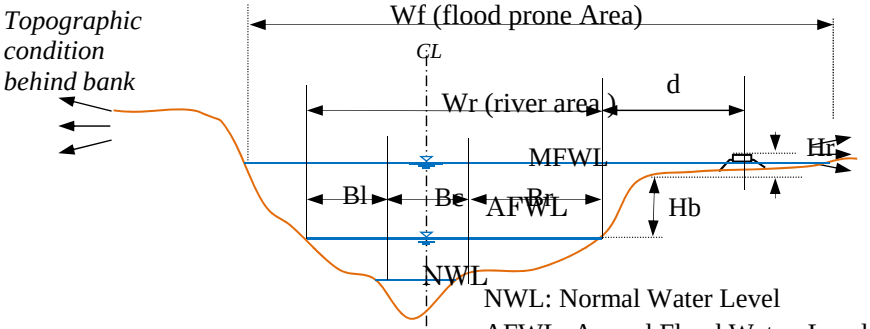


Photo Downstream

Location

Cross Section



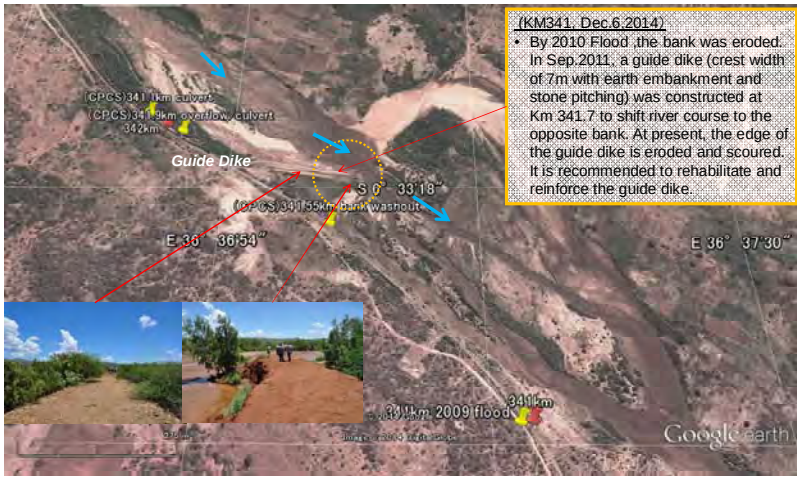
Inventory Sheet for River/Channel

Station: From KM344.8			Sheet No.: CH-344.8
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 3, 2014 1255
1-4	Location	Lat	06° 35' 33.8" - 36.3"
1-5		Long	36° 39' 44.0" - 51.3"
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		300m, a Guide dike
2-2	Nos. of River		none
2-3	River Channel Alignment		meandering
2-4	River Cross Section		compound section
2-5	River Width		Wf: m, Wr: approx.300 m Bl: m, Bc:50 m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hb:2.5 m
2-9		Side Slope	Sl: 1v: , Sr: 1v: (vertical)
2-10		Vegetation	Grass
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		Red
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d=116m
2-18	Damaged Record, if any (year/month)		none
2-19	Reason of		Bank erosion
2-20	Pattern of Riverbed		Rising of riverbed in long distance

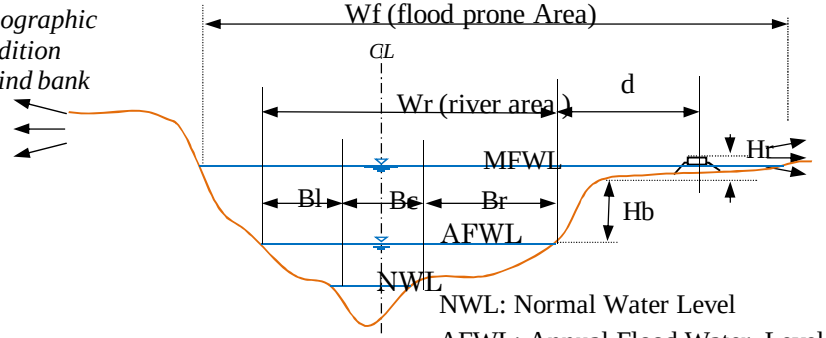
Photo Upstream

Photo Downstream

Location



Cross Section

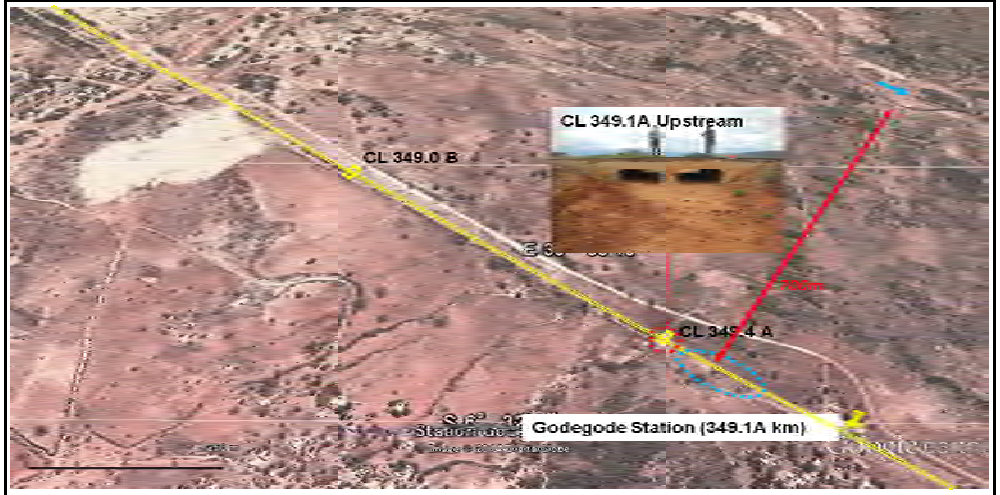


Inventory Sheet for River/Channel

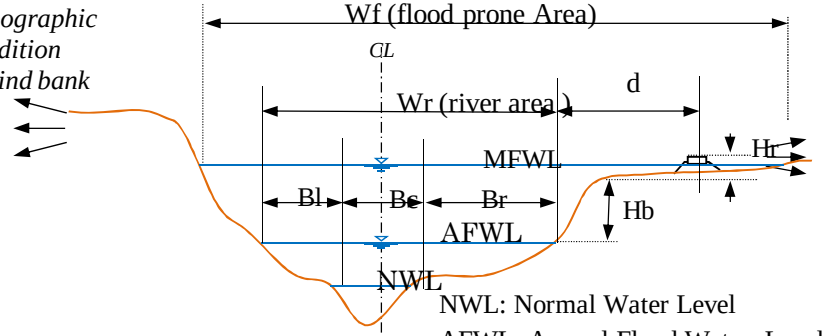
Station:From KM349.1A to KM349.9B			Sheet No.: CH- 349.1A
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 31′ 42″ 42‴
1-5		Long	36º 33′ 37″ 84‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		2 culverts
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 41 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		Cultivation
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 700 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location



Cross Section



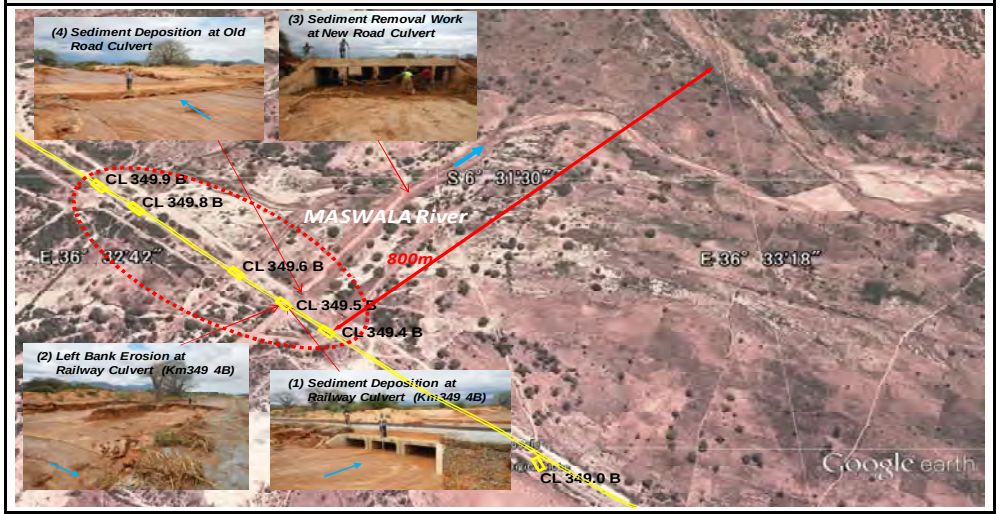
Inventory Sheet for River/Channel

Station: From KM349.4B to KM349.9B			Sheet No.: CH- KM 349.4B
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 31′ 32″ 63‴
1-5		Long	36º 33′ 24″ 88‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		6 culverts
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound Section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 154 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		Cultivation
2-17	Location of Railway		d = 800 m
2-18	Damaged Record, if any (year/month)		Culverts of the railroad have been deposited by the sediment in the tributary MASUWALA RIVER, and river flow prevention has been occurred . The railroad bank has been scored by the
2-19	Reason of		Flood flow overtopped railway track
2-20	Pattern of Riverbed		

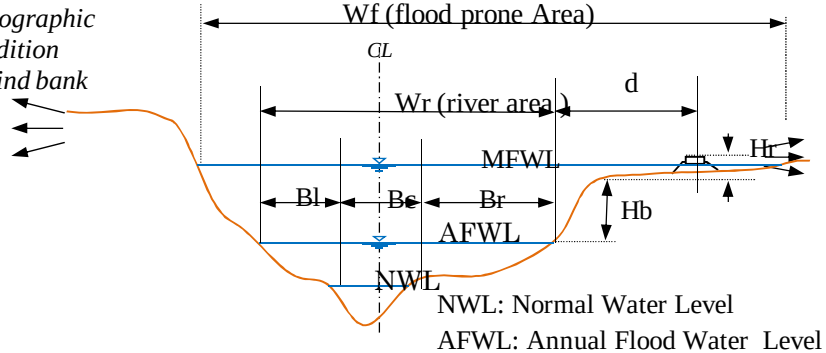
Photo Upstream

Photo Downstream

Location



Cross Section



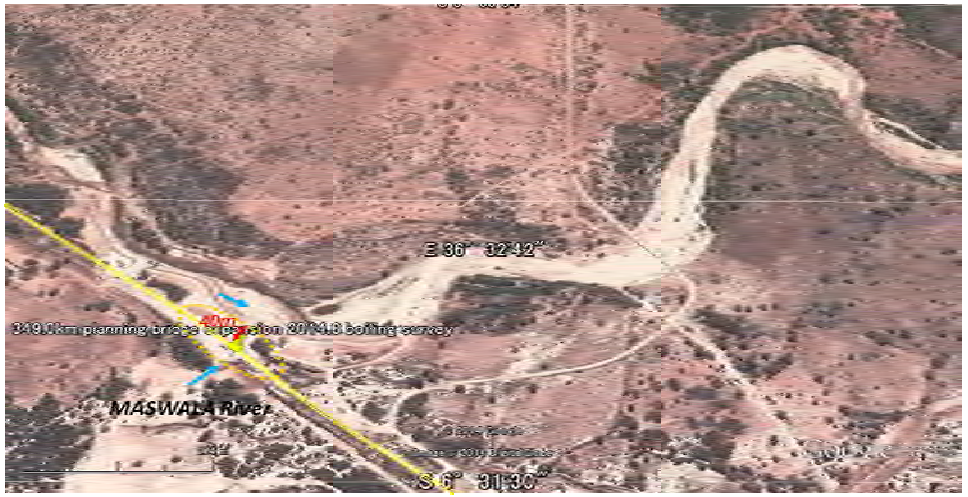
NWL: Normal Water Level
AFWL: Annual Flood Water Level
MFWL: Maximum Flood Water Level

Inventory Sheet for River/Channel

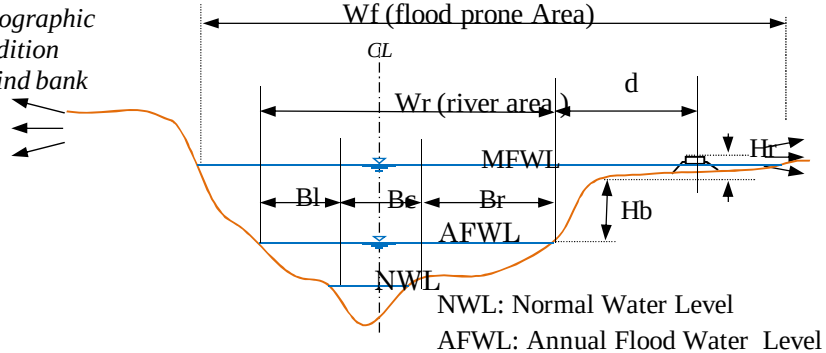
Station:From KM 349.9B - KM 349.9C			Sheet No.: CH- KM 349.9B
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 31′ 32″ 63‴
1-5		Long	36º 33′ 24″ 88‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 72 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forest, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 40 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location



Cross Section



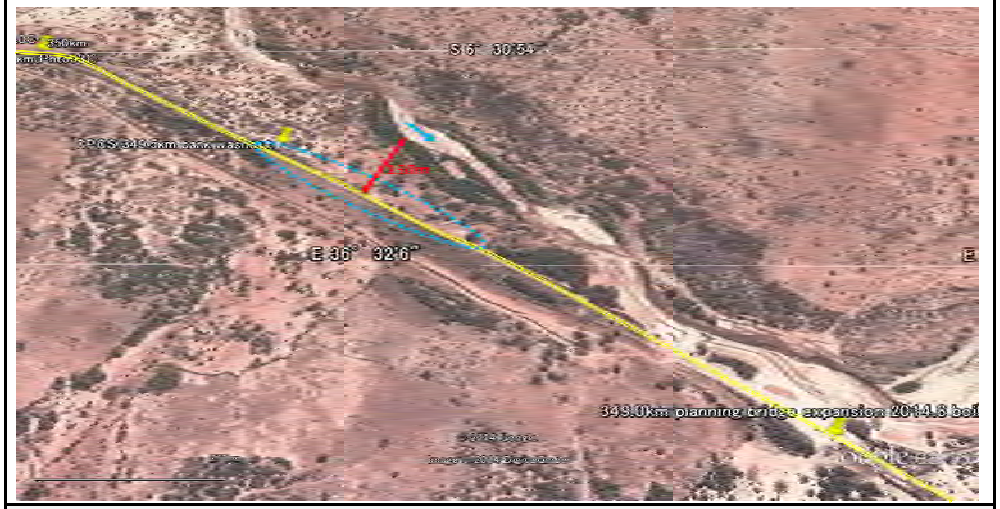
NWL: Normal Water Level
AFWL: Annual Flood Water Level
MFWL: Maximum Flood Water Level

Inventory Sheet for River/Channel

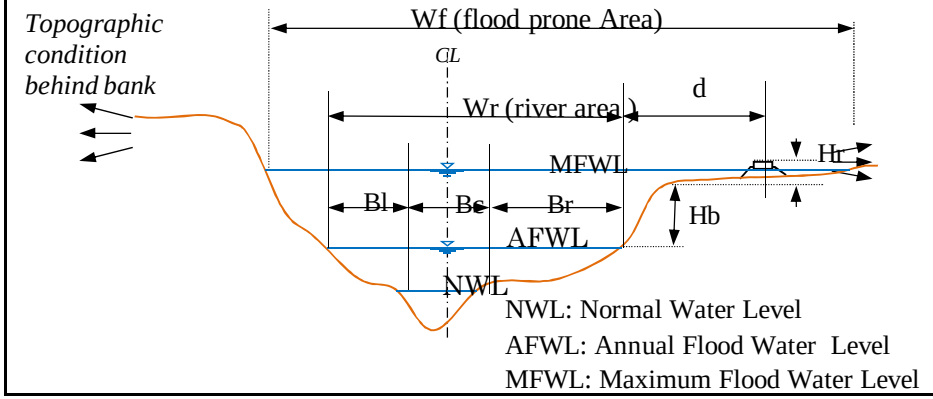
Station:From KM349.9C to KM350			Sheet No.: CH- KM 349.9C
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 31′ 01″ 94‴
1-5		Long	36º 32′ 07″ 81‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water height Area
2-4	River Cross Section		
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 51 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 150 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location



Cross Section



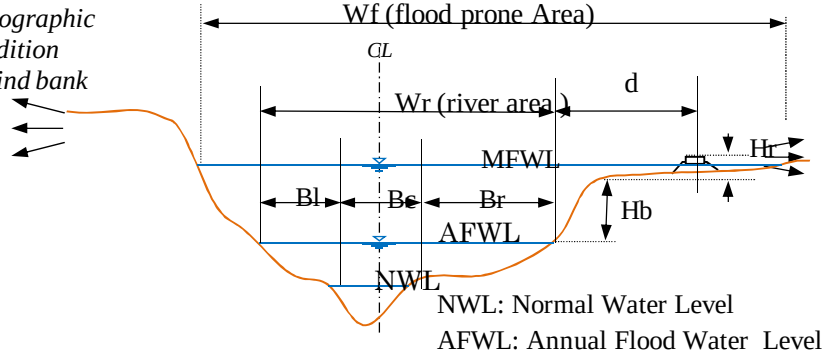
Inventory Sheet for River/Channel

Station:From KM350 to KM351			Sheet No.: CH- KM 350
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 30′ 45″ 41‴
1-5		Long	36º 31′ 47″ 41‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River Facility		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 33 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 280 m
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location

Cross Section



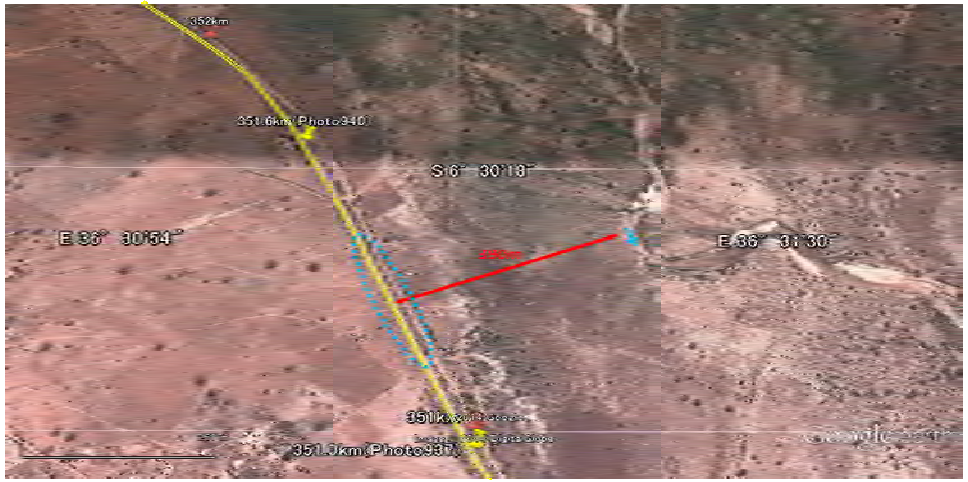
NWL: Normal Water Level
AFWL: Annual Flood Water Level
MFWL: Maximum Flood Water Level

Inventory Sheet for River/Channel

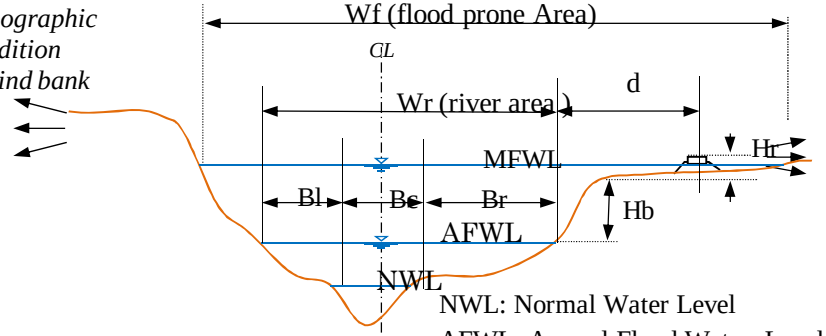
Station:From KM351 to KM352			Sheet No.: CH- KM 351
1. General			
1-1	Name of Inspector		T. Kawaguchi ,, Hussein , Abiud
1-2	Organization of Inspector		River Group D
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	6º 30′ 23″ 11‴
1-5		Long	36º 31′ 21″ 22‴
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		
2-2	Nos. of River		
2-3	River Channel Alignment		Meandering , Water Hit Area
2-4	River Cross Section		Compound section
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: 34 m, Br: m
2-6	Riverbed Slope		
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: 3 m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d = 390
2-18	Damaged Record, if any (year/month)		
2-19	Reason of		
2-20	Pattern of Riverbed		

Photo Upstream	Photo Downstream

Location



Cross Section



Inventory Sheet for River/Channel

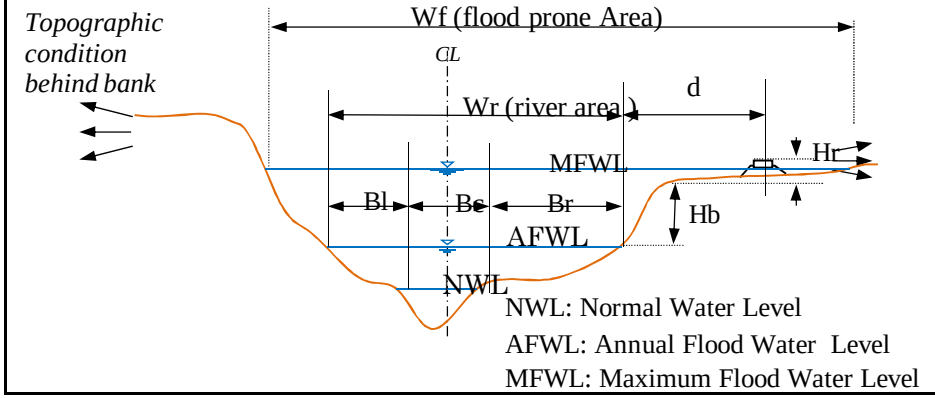
Station: From KM355.1			Sheet No.: CH-355.1
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 2, 2014 1325
1-4	Location	Lat	
1-5		Long	
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		KM354.9-355.2
2-2	Nos. of River		Gabion, culvert (1), bridge(1)
2-3	River Channel Alignment		Straight, water hit area
2-4	River Cross Section		compond
2-5	River Width		Wf: m, Wr:300-600 m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hb: 4.0 - 5.3m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	none
2-11	Estimated Flow Velocity		normal: 0 m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		yellow color soil
2-15	Topography		left: ⟵ ,right ⟶
2-16	Structures/Houses, road		none
2-17	Location of Railway		d=22mpkm355.1
2-18	Damaged Record, if any (year/month)		After 2010 flood, gabion were insatalled. Boulders are delivered from Gulwe, and sands are extraccte neare site.
2-19	Reason of		Bank erosion & overflow
2-20	Pattern of Riverbed		

Photo Upstream

Photo Downstream

Location

Cross Section



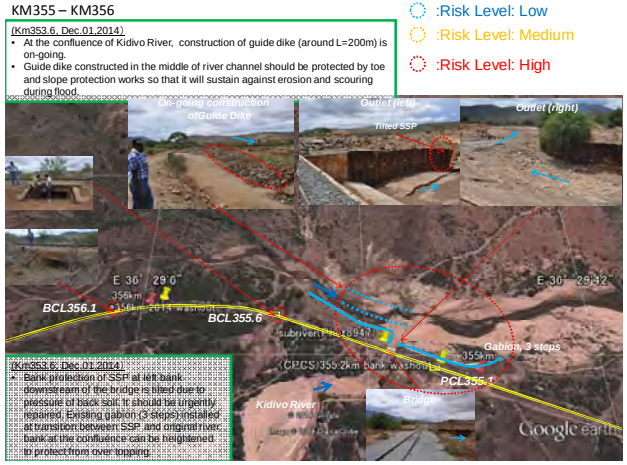
Inventory Sheet for River/Channel

Station:KM355.2(conf. Kidivo)			Sheet No.: CH-355.2
1. General			
1-1	Name of Inspector		T.Fukuda, Mr. Kido, Mr. Philipo
1-2	Organization of Inspector		Team B
1-3	Date/Time of Inspection		Dec. 2, 2014
1-4	Location	Lat	
1-5		Long	
2. Characteristics of Physical Condition of River Channel			
2-1	Length of Objective Area		300m, Km355.2-Km355.5
2-2	Nos. of River		
2-3	River Channel Alignment		Straight
2-4	River Cross Section		
2-5	River Width		Wf: m, Wr: m Bl: m, Bc: m, Br: m
2-6	Riverbed Slope		Gentle
2-7	Riverbed Material	Material	Sand
2-8	River Bank	Bank Height	Hl: m
2-9		Side Slope	Sl: 1v: , Sr: 1v:
2-10		Vegetation	Tall grass
2-11	Estimated Flow Velocity		normal: m/s, flood m/s
2-12	Characteristic of environmental condition of river channel		Riverside forests, Sandbar, Pool, shoal, fishes, etc
2-13	Land Use		none
2-14	Soil Type		Laterite
2-15	Topography		left: ← ,right →
2-16	Structures/Houses, road		none
2-17	Location of Railway		d=28.6m@ Km355.2
2-18	Damaged Record, if any (year/month)		Steel sheet pile and gabion (3 steps) are installed for protection of left and right banks of outlet channel at confluence of Kidivo River. Guide channel and dike are being constructed. 2 parties of (2BH,1DT) & (1DZ,1BH,1DT)
2-19	Reason of		Bank erosion
2-20	Pattern of Riverbed		siltation at confluence

Photo Upstream

Photo Downstream

Location



Cross Section