

Attachment-H.3

Inventory Survey of Existing Check Dams

Attachment-H.3 Inventory Survey of the Existing Check Dams

1. Objectives

The inventory survey of existing check dams in the Intensive Area has been carried out in the Phase-II Field Work (September 2000 to January 2001). The objectives of the survey were:

- Identify the necessary rehabilitation works of the existing check dams, and
- Estimate the sediment yield of the existing check dams.

2. Method

The survey of has been carried out by visiting and interviewing method.

3. Result

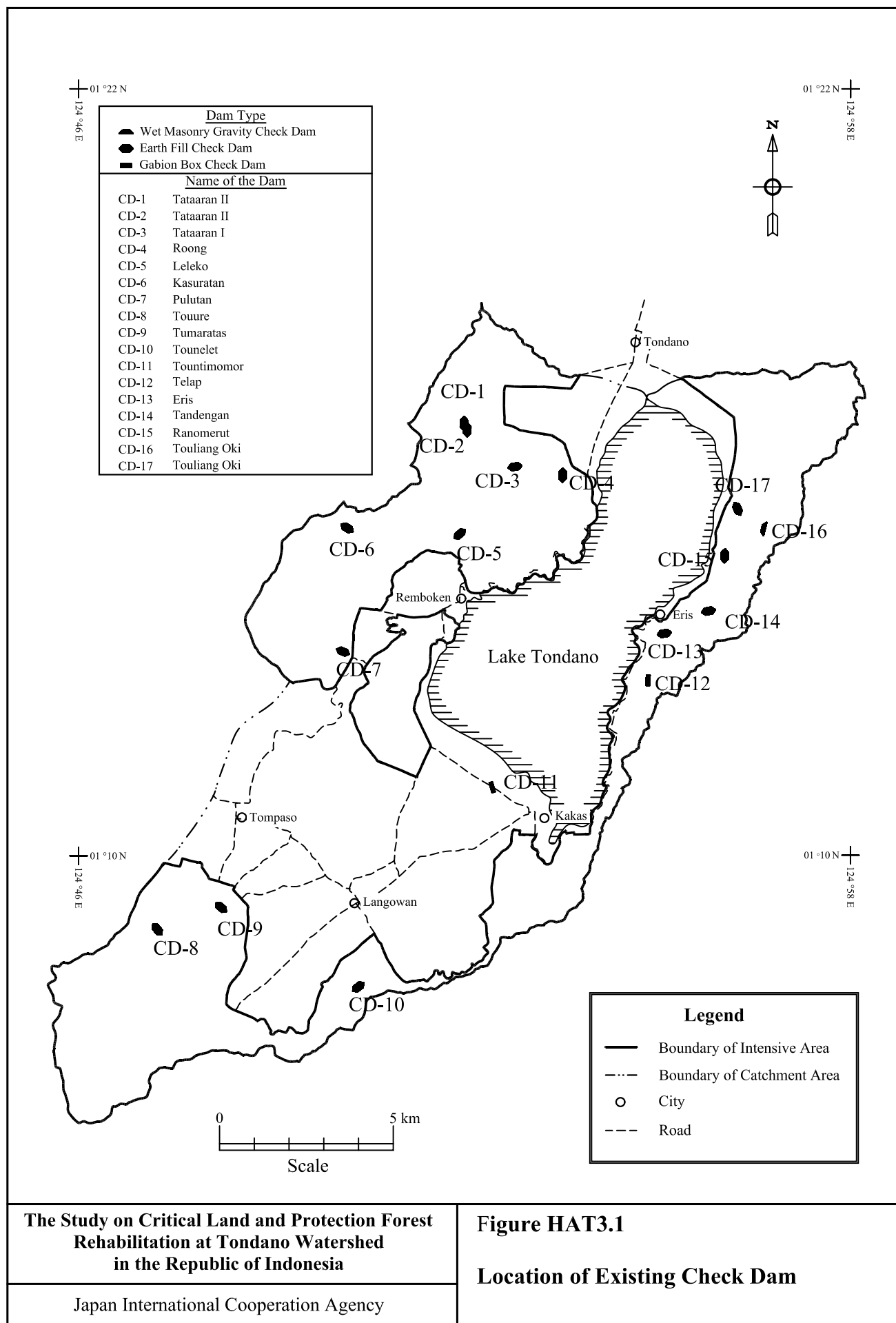
The result of the survey is shown in Table HAT3.1 to 3.2, Figure HAT3.1 to 3.18 and also in section 3.1.9 of Appendix-H.

Table HAT3.1 List of Existing Check Dam

No.	Name of the Dam	Location							Year of Construction	Government Agency	Catchment Area (ha)	Dam Dimension				
		North Latitude	East Longitude	Town	Sub District	Sub-watershed No.	Zone	Area				Type	No. of the Dam (nos.)	Crest Length (m)	Dam Height (m)	Crest Width (m)
CD - 1	Tataaran II	01°16'45"	124°52'02"	Tataaran II	Tondano	2	B1	West	1983/1984	BRLKT	133	Earth Fill Dam	1	25.0	4.0	4.0
CD - 2	Tataaran II	01°16'39"	124°52'05"	Tataaran II	Tondano	2	B1	West	1984/1985	BRLKT	32	Earth Fill Dam	1	45.0	6.5	10.0
CD - 3	Tataaran I	01°16'06"	124°52'48"	Tataaran I	Tondano	-	B2	West	1983/1984	BRLKT	81	Earth Fill Dam	1	45.0	Unknown	4.0
CD - 4	Roong	01°15'57"	124°53'32"	Tounsaru	Tondano	5	B2	West	1982/1983	BRLKT	100	Earth Fill Dam	1	40.0	4.5	3.5
CD - 5	Leleko	01°15'01"	124°51'56"	Leleko	Remboken	6	B2	West	1984/1985	BRLKT	68	Earth Fill Dam	1	45.0	5.0	2.5
CD - 6	Kasuratan	01°15'07"	124°50'11"	Kasuratan	Remboken	-	B3	West	1991/1992	BRLKT	22	Earth Fill Dam	1	30.0	2.0	3.5
CD - 7	Pulutan	01°13'11"	124°50'09"	Pulutan	Remboken	-	B2	West	1995/1996	District Forest Survice	13	Earth Fill Dam	1	44.0	6.0	3.5
CD - 8	Touure	01°08'50"	124°47'15"	Touure	Tompaso	10	B2	South	1991/1992	BRLKT	59.2	Earth Fill Dam	1	-	-	-
CD - 9	Tumaratas	01°09'12"	124°48'14"	Tumaratas	Langowan	11	F	South	1993/1994	District Forest Survice	379	Earth Fill Dam	1	45.0	8.0	4.0
CD - 10	Tounelet	01°07'57"	124°50'21"	Tounelet	Langowan	-	B2	South	1997/1998	District Forest Survice	19	Earth Fill Dam	1	40.0	4.5	3.5
CD - 11	Tountimomor	01°11'04"	124°52'26"	Tountimomor	Kakas	-	-	-	1997/1998	District Forest Survice	6,770	Gabion Box Check Dam	2	7.0	Unknown	-
CD - 12	Telap	01°12'44"	124°54'48"	Telap	Eris	16	B1	East	1994/1995	District Forest Survice	42	Dam Penahan	4	4.0	0.0	-
CD - 13	Eris	01°13'30"	124°55'06"	Eris	Eris	17	B1	East	1984/1985	BRLKT	100	Earth Fill Dam	1	75.0	2.5	4.0
CD - 14	Tandengan	01°13'51"	124°55'47"	Tandengan	Eris	19	B1	East	1984/1985	BRLKT	30	Earth Fill Dam	1	40.0	4.0	4.0
CD - 15	Ranomerut	01°14'41"	124°56'01"	Ranomerut	Eris	-	B2	East	1983/1984	BRLKT	13	Earth Fill Dam	1	35.0	3.0	6.0
CD - 16	Touliang Oki	01°15'07"	124°56'36"	Touliang Oki	Eris	24	B2	East	1997/1998	Provincial Irrigation Office	104	Wet Masonry Gravity Dam	1	80.0	5.0	3.0
CD - 17	Touliang Oki	01°15'25"	124°56'13"	Touliang Oki	Eris	-	B2	East	1983/1984	BRLKT	21	Earth Fill Dam	1	50.0	3.5	4.0

Table HAT3.2 Status of Existing Check Dam

No.	Name of the Dam	Condition of Sediment Control			Condition of Water Supply				Condition of Dam Body
		Status of Sediment Control	Deposition Gradient (%)	Average Sediment Yield (ton/ha/year)	Intention for Water Supply	Purpose of Water Supply	Present Land Use of Downstream	Condition of Downstream Irrigation System	
CD - 1	Tataaran II	Functioning	N/A	N/A	Yes	Irrigation	Arable Upland	Not functioning	
CD - 2	Tataaran II	Functioning	N/A	N/A	Yes	Irrigation	Arable Upland	Not functioning	
CD - 3	Tataaran I	Abandoned	N/A	N/A	Yes	Irrigation	University Campus / Arable Upland	Abandoned	
CD - 4	Roong	Functioning	0.5	2,800	Yes	Irrigation	Grassland	Not Functioning	
CD - 5	Leleko	Functioning	1.8	3,000	Yes	Irrigation	Arable Upland	Not functioning	A part of dam body has damaged.
CD - 6	Kasuratan	Functioning	N/A	N/A	No	None	-	-	A part of spillway has damaged.
CD - 7	Pulutan	Functioning	3.0	1,000	No	None	-	-	
CD - 8	Touure	Not Functioning	N/A	N/A	No	None	-	-	Dam body has collapsed.
CD - 9	Tumaratas	Functioning	N/A	N/A	Yes	Irrigation	Paddy Field	Good	
CD - 10	Tounelet	Functioning	N/A	N/A	Yes	Irrigation	Paddy Field	Unknown	
CD - 11	Tountimomor	Functioning	N/A	N/A	No	None	-	-	
CD - 12	Telap	Functioning	N/A	N/A	No	None	-	-	
CD - 13	Eris	Functioning	N/A	N/A	Yes	Inland Fishery	Fish Pond	-	
CD - 14	Tandengan	Functioning	N/A	N/A	Yes	Irrigation	Paddy Field	Not functioning	
CD - 15	Ranomerut	Functioning	N/A	N/A	Yes	Irrigation	Paddy	Bad	
CD - 16	Touliang Oki	Functioning	N/A	N/A	No	None	-	-	
CD - 17	Touliang Oki	Functioning	N/A	N/A	Yes	Irrigation	Paddy	Good	



Inventory Survey of Check Dams in the Intensive Area

Inventory ID No.

CD - 1

Page 1/2

Survey Date **13-Oct-00**

1) Location

Name of the Dam

Tataaran II

Coordinate

01°16'45"

N

124°52'02"

E

Tataaran II, Sub-district Tondano

2) History

Year of construction

1983/1984

Government agency

BRLKT

3) Catchment Area

Sub-watershed No.

2

Name of the Downstream River

Toubeke

Catchment area

133 ha

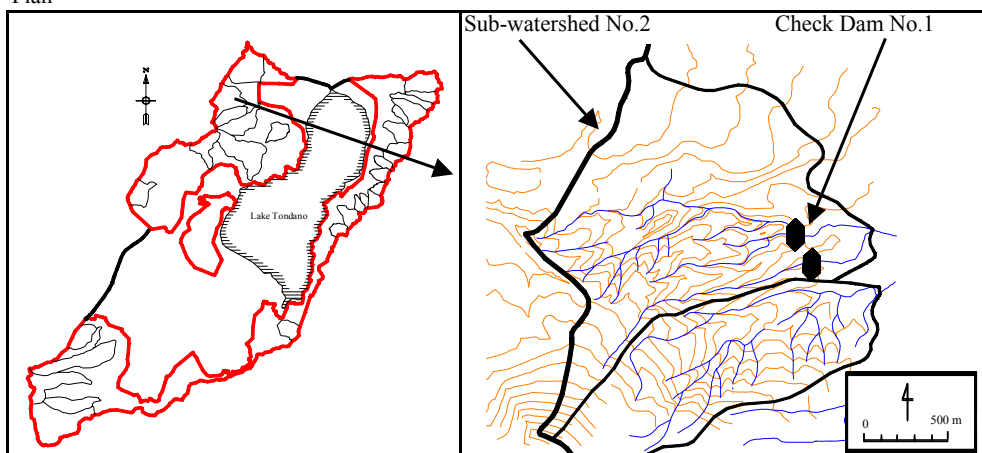
Estimated original river gradient

7.5 %

Landuse of the upstream

Forest/Arable Upland

Plan



4) Dam Body

Dam Type

Earth Fill Dam

Crest Length

25.0 m

D/S Slope

1:2.5

Crest Width

4.0 m

Dam Height

4.0 m

Note :

D/S = Downstream

View from upstream



Condition

Good.

**The Study on Critical Land and Protection Forest
Rehabilitation at Tondano Watershed
in the Republic of Indonesia**

Japan International Cooperation Agency

Figure HAT3.2

**Inventory Survey of Existing Check Dam
(CD-1) (1/2)**

Inventory Survey of Check Dams in the Intensive Area

Inventory ID No.

CD - 1

Page 2/2

Survey Date **13-Oct-00**

5) Spillway

Spillway Bed Width **3.5** m
Spillway Height **1.5** m

Material **Wet Masonry**

View of spillway



Condition

Good.

6) Intake Gate

Type **Sluice Gate**

View of intake gate



Condition

Unknown.

7) Water Supply

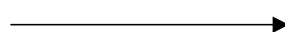
Intention for Water Supply	Yes
Purpose of Water Supply	Irrigation
Present Land Use of the Downstream	Arable Upland
Condition of Irrigation Facilities	Not functioning

8) Sedimentation

Status of Sediment Control	Functioning
Deposition Gradient	N/A
Sedimentation Yield	N/A m ³ N/A ton/ha/year

9) Dam Lake

General View of Dam Lake



**The Study on Critical Land and Protection Forest
Rehabilitation at Tondano Watershed
in the Republic of Indonesia**

Japan International Cooperation Agency

Figure HAT3.2

**Inventory Survey of Existing Check Dam
(CD-1) (2/2)**