

DATA SHEET 1

Worksheet for Catchment Areas

Name of school/community: _____

Name of river: _____

Date: _____

In a few words, describe the immediate area around the test site:

(i) OBSERVATION OF CATCHMENT (The following observations relate to the catchment of the river under study.)

Note: Indicate a weight number, depending on the “Yes” or “No” in each score. The higher the observed impact of a land usage, the lower the score.

WHAT HUMAN SETTLEMENTS ARE PRESENT IN THE CATCHMENT?

EVALUATION CRITERIA	WEIGHT		SCORE
	YES	NO	
1. SETTLEMENTS			
1.1 FORMAL - DEVELOPED	40	92	
1.2 DEVELOPING SETTLEMENTS	20	128	
1.3 INFORMAL	10	140	
AVERAGE SCORE 1 (Add scores and divide total by 3)			

WHAT ACTIVITIES TAKE PLACE IN THE CATCHMENT, OTHER THAN RESIDENTIAL?

EVALUATION CRITERIA	WEIGHT		SCORE
	YES	NO	
2. CATCHMENT ACTIVITIES			
AGRICULTURE			
2.1 STOCK FARMING (e.g. sheep, cattle, etc.)	20	125	
2.2 CROP FARMING (e.g. maize, wheat, etc.)	50	125	
INDUSTRIAL			
2.3 WET INDUSTRIES (produce liquid waste)	10	125	
2.4 DRY INDUSTRIES (no liquid waste)	40	125	
2.5 MINING (e.g. coal, gold, etc.)	10	125	
SANITATION			
2.6 WASTE WATER WORKS PRESENT	30	125	
2.7 INFORMAL WASTE SYSTEMS EXIST (e.g. pit toilets)	10	125	
DUMPING SITES			
2.8 DEVELOPED (controlled)	50	125	
2.9 DEVELOPED (uncontrolled)	20	125	
AVERAGE SCORE 2 (Add scores and divide total by 9)			

Any other observations:

(ii) OBSERVATION OF RIVER AT TEST SITE

WHAT ACTIVITIES ARE PRESENT ON THE RIVER BANK?

EVALUATION CRITERIA	WEIGHT		SCORE
	YES	NO	
3.1 RIVER BANK USAGE			
3.1.1 HEAVILY INDUSTRIALISED/ URBANISED	10	40	
3.1.2 DENSELY POPULATED/ INFORMAL SETTLEMENTS	210	140	
3.1.3 URBANISED/FORMAL SETTLEMENTS	35	140	
3.1.4 NEGLECTED/INFORMAL DUMPING	35	140	
3.1.5 CONSERVED/RECREATIONAL AREAS	140	70	
3.2 WETLANDS			
3.2.1 PRESENT	175	35	
AVERAGE SCORE 3 (Add scores and divide total by 6)			

**WHAT DISTANCE ARE HUMAN ACTIVITIES FROM THE RIVER?
(Use only one value)**

EVALUATION CRITERIA	WEIGHT	SCORE
	YES	
4. DISTANCE OF ACTIVITIES FROM RIVER (metres)		
4.1 0 m	0	
4.2 100 m	11	
4.3 1 000 m	40	
4.4 5 000 m	125	
AVERAGE SCORE 4 (Single value, no average)		

(iii) WATER QUALITY OBSERVATIONS

EVALUATION CRITERIA	WEIGHT		SCORE
	YES	NO	
5. WATER QUALITY			
5.1 SOLID WASTES (plastics, paper)	20	70	
5.2 GREEN COLOUR	20	70	
5.3 SMELLY	10	80	
5.4 OIL SLICK	0	80	
5.5 FOAM/FROTH	0	80	
5.6 SLIME	20	100	
5.7 RAW SEWAGE	0	150	
5.8 DEAD INSECTS/FROGS/FISH	0	150	
AVERAGE SCORE 5 (Add scores and divide total by 8)			

Any other observations:

(iv) FIELD OBSERVATION SCORE

Calculate your field observation score as follows:

1. Add averages 1, 2, 3, 4 and 5, and divide sub-total by 5.

Average 1	Average 2	Average 3	Average 4	Average 5	SUB-TOTAL
TOTAL					÷ 5
					%

2. Use the answer obtained to determine the state of the catchment from the table below.

Average value for the catchment area: _____ %

0 - 19 %	20 - 39 %	40 - 59 %	60 - 79 %	80 - 100 %
Entire catchment severely modified and degraded	Serious degradation identified	Catchment modified but the river is still able to cleanse and to sustain itself	Minor problems identified	River vegetation intact and catchment well conserved

Record this average value for the catchment area in the **Summary of Water Quality Values** filed under **Results of Water Quality Testing**. This value will be used in the assessment of the river catchment.

Discuss your findings as a group.

Summary of group's comments: _____
