

CASE STUDY: PRIVATE SECTOR IN WATER STEWARDSHIP

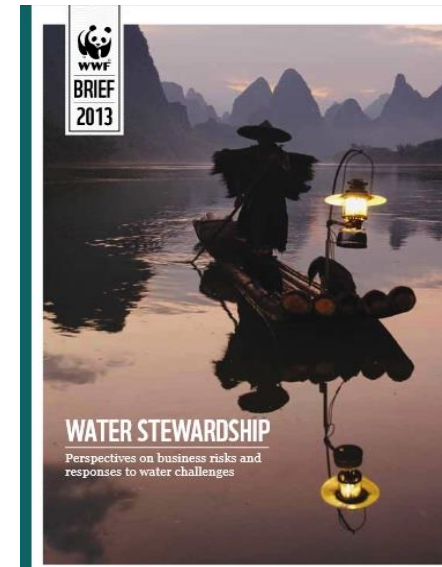
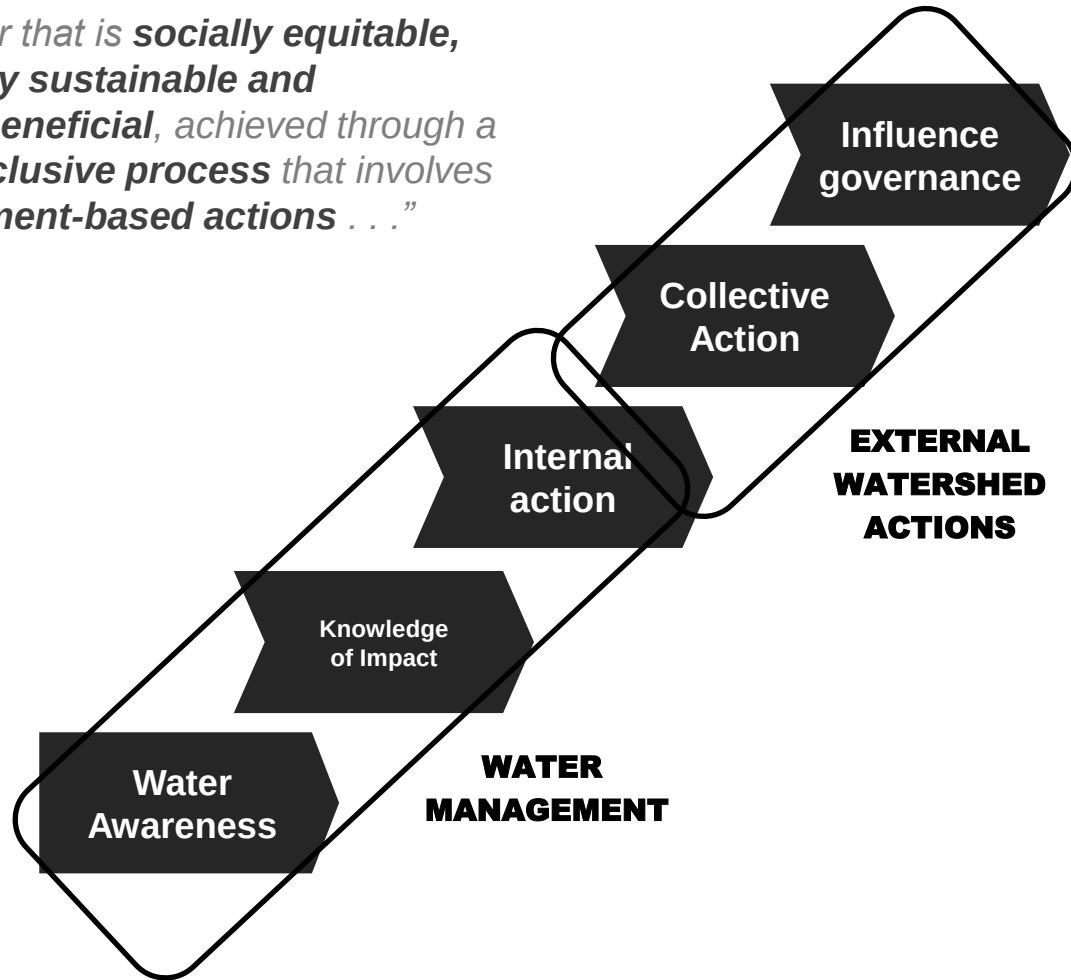
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WWF-Guatemala/Mesoamérica

Montevideo, October 9th, 2017



Elements of a water stewardship strategy

*“...use of water that is **socially equitable**, **environmentally sustainable** and **economically beneficial**, achieved through a **stakeholder-inclusive process** that involves **site and catchment-based actions** ...”*

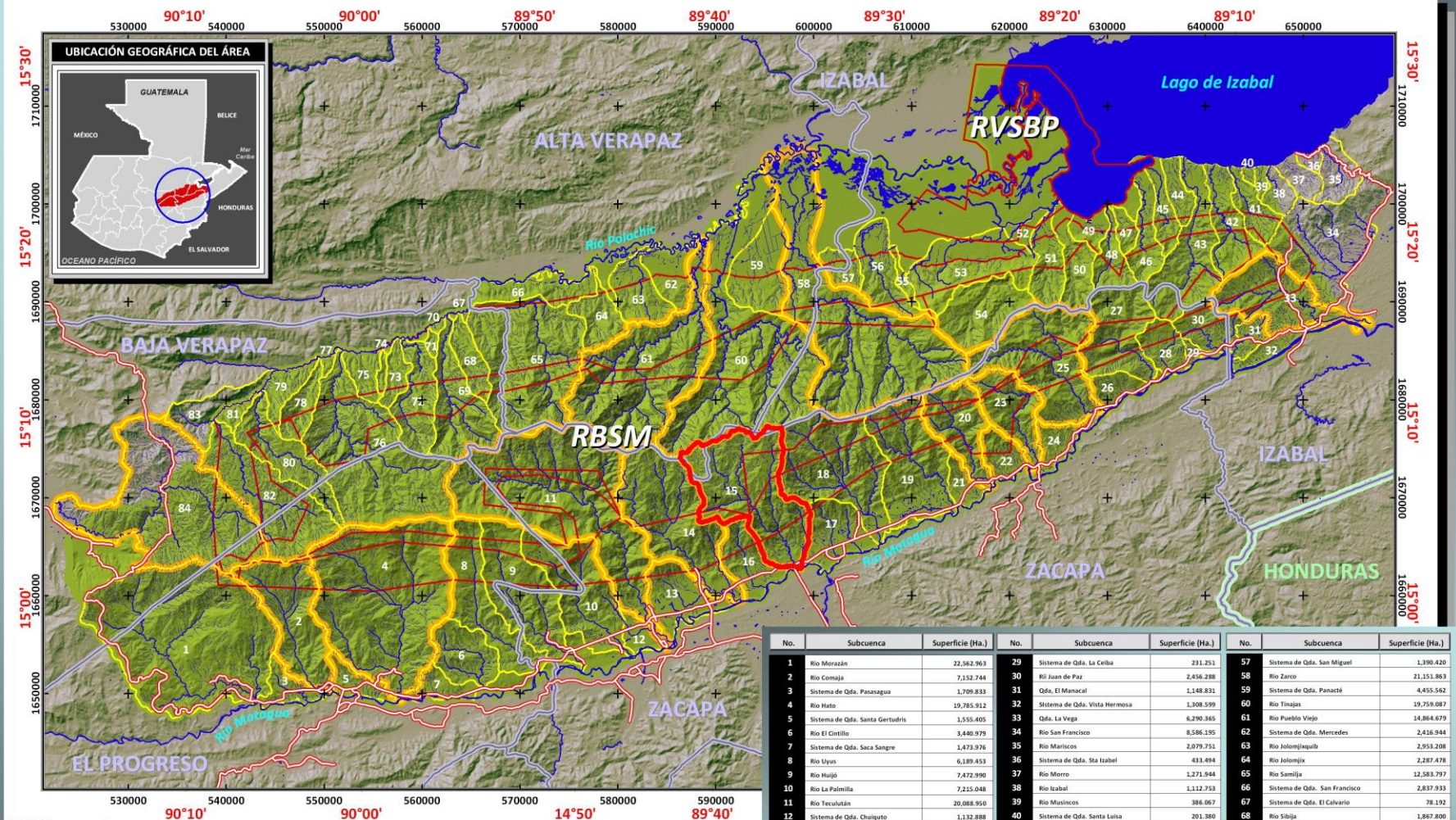


WATER FUND SIERRA DE LAS MINAS

General Objective:
Maintain the quality
and quantity of
freshwater in the
Motagua-Polochic
System



SUBCUENCAS EN LA RESERVA BIOSFERA SIERRA DE LAS MINAS CON INVERSIÓN DEL FONDO DEL AGUA



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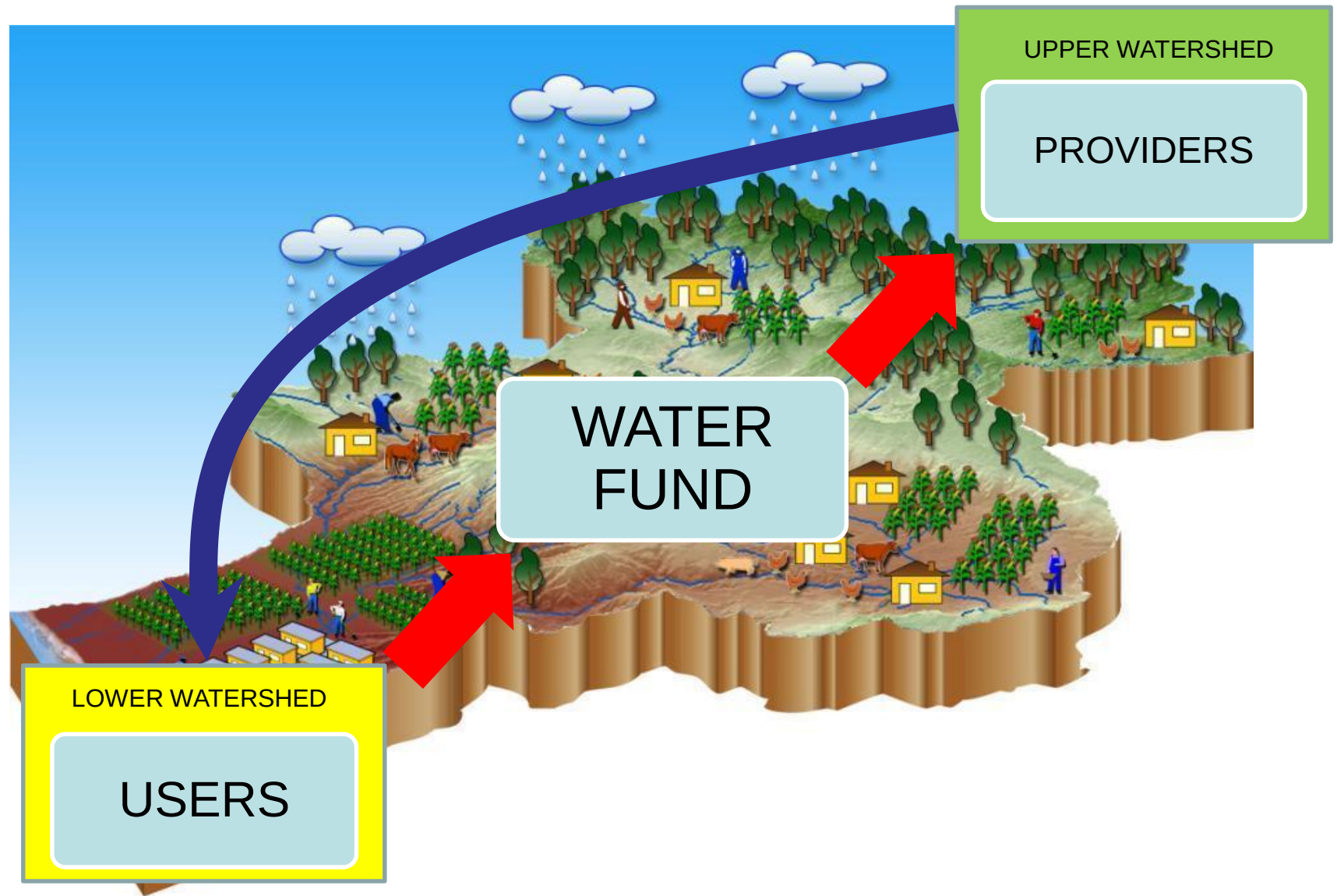


LEYENDA

- Límite de Subcuencas
- Subcuencas con Inversión Fondo del Agua
- Sistema Motagua Polochic
- Caminos
- Límite Departamental
- Río Permanente
- Río Intermitente
- Cuerpo de Agua

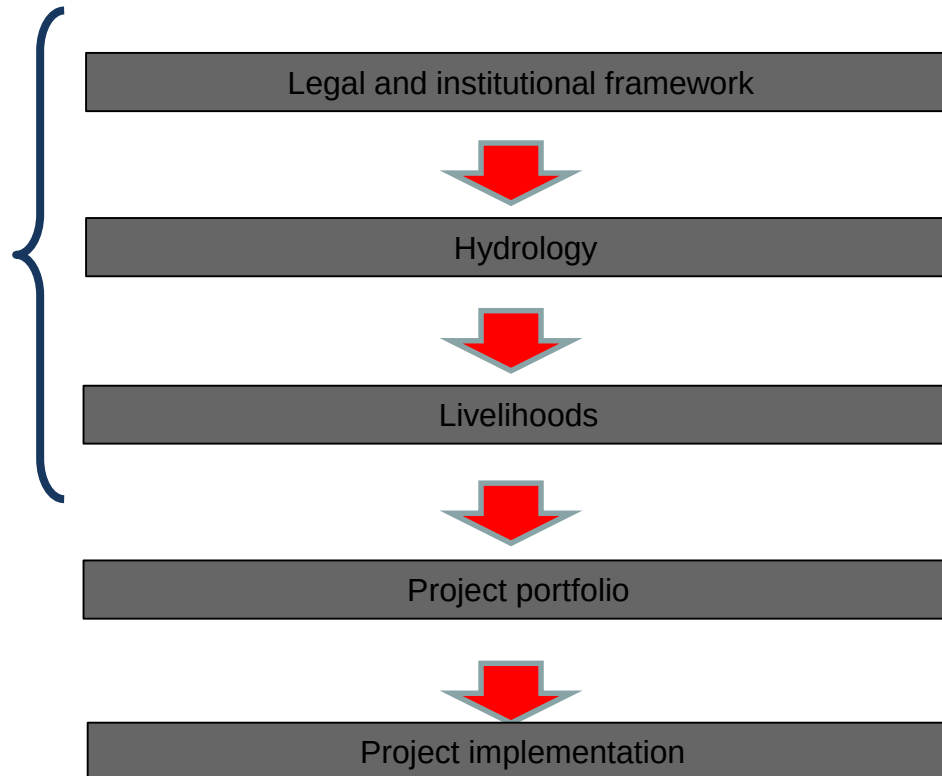
No.	Subcuenca	Superficie (Ha.)	No.	Subcuenca	Superficie (Ha.)	No.	Subcuenca	Superficie (Ha.)
1	Rio Morazan	22,562.963	29	Sistema de Qda. La Ceiba	231.251	57	Sistema de Qda. San Miguel	1,390.420
2	Rio Comaja	7,152.744	30	Rio Juan de Paz	2,456.288	58	Rio Zarco	21,151.863
3	Sistema de Qda. Pasanagua	1,709.833	31	Qda. El Manacal	1,448.831	59	Sistema de Qda. Panacté	4,455.562
4	Rio Mito	19,785.912	32	Sistema de Qda. Vista Hermosa	1,308.599	60	Rio Tinajas	19,759.087
5	Sistema de Qda. Santa Gertrudis	1,555.405	33	Qda. La Vega	6,290.365	61	Rio Pueblo Viejo	14,864.679
6	Rio El Cutillo	3,440.979	34	Rio San Francisco	8,586.195	62	Sistema de Qda. Mercedes	2,416.944
7	Sistema de Qda. Saca Sangre	1,473.976	35	Rio Mariscos	2,079.751	63	Rio Jolomiquil	2,953.208
8	Rio Uyer	6,189.453	36	Sistema de Qda. Sta. Isabel	433.494	64	Rio Jolomijil	2,287.478
9	Rio Huijil	7,472.990	37	Rio Morro	1,271.944	65	Rio Samilja	12,583.797
10	Rio La Palmilla	7,215.048	38	Rio Izabal	1,112.753	66	Sistema de Qda. San Francisco	2,837.933
11	Rio Teculután	20,088.950	39	Rio Mucinos	386.067	67	Sistema de Qda. El Calvario	78.192
12	Sistema de Qda. Chiquito	1,132.888	40	Sistema de Qda. Santa Luisa	201.380	68	Rio Sibila	1,867.800
13	Sistema de Qda. Los Zaplotes	3,877.801	41	Rio Los Esquinos	1,986.350	69	Rio Chuelo Mulujá	5,267.376
14	Rio Pasabien	10,157.916	42	Rio Los Limones	3,650.235	70	Sistema de Qda. Rio Matanzas	162.646
15	Rio Hondo	10,666.594	43	Rio Las Cañas	6,224.268	71	Sistema de Qda. La Pinada	274.610
16	Sistema de Qda. Paso Hondo	3,238.064	44	Sistema de Qda. Las Cañas	1,351.864	72	Rio Panzacaj	3,834.106
17	Sistema de Qda. La Pepesca	3,613.279	45	Rio Balandra	1,804.379	73	Quebrada Cochobaja	1,204.216
18	Rio Jones	9,579.561	46	Rio El Chapin	2,413.278	74	Quebrada Balanche	338.151
19	Rio Santiago	7,881.955	47	Rio Las Guaitas	790.695	75	Sistema de Qda. Ribacó	1,459.974
20	Rio Los Achotes	4,449.629	48	Rio Patate	1,905.873	76	Rio Ribacó	14,830.778
21	Sistema de Qda. Juan Ponce	1,257.672	49	Sistema de Qda. Patate	1,146.670	77	Sistema de Qda. Olimpia	239.056
22	Sistema de Qda. El Jicaró	1,786.673	50	Rio Sierra de las Minas	2,729.645	78	Rio Chuelo Cocaj	1,852.157
23	Rio Mayuelas	4,012.463	51	Rio Zangaito	2,604.918	79	Sistema de Qda. Las Flores	1,608.080
24	Sistema de Qda. Guayabal	1,903.772	52	Rio Oscuro	764.538	80	Rio San Antonio	4,460.604
25	Rio El Lobo	9,684.144	53	Rio Chinelal	6,397.923	81	Sistema de Qda. Sinanjá	623.824
26	Sistema de Qda. Los Encinitos	1,446.531	54	Rio Tzambala	4,816.563	82	Rio Chilucó	8,375.111
27	Rio Chuelo Doña María	5,585.206	55	Sistema de Qda. San Pablo	324.972	83	Rio Sinanjá	2,745.903
28	Sistema de Qda. Mestizo	2,126.233	56	Rio Pencilá	3,600.849	84	Rio San Jerónimo	17,802.718

PAYMENT FOR ENVIRONMENTAL SERVICES SCHEME

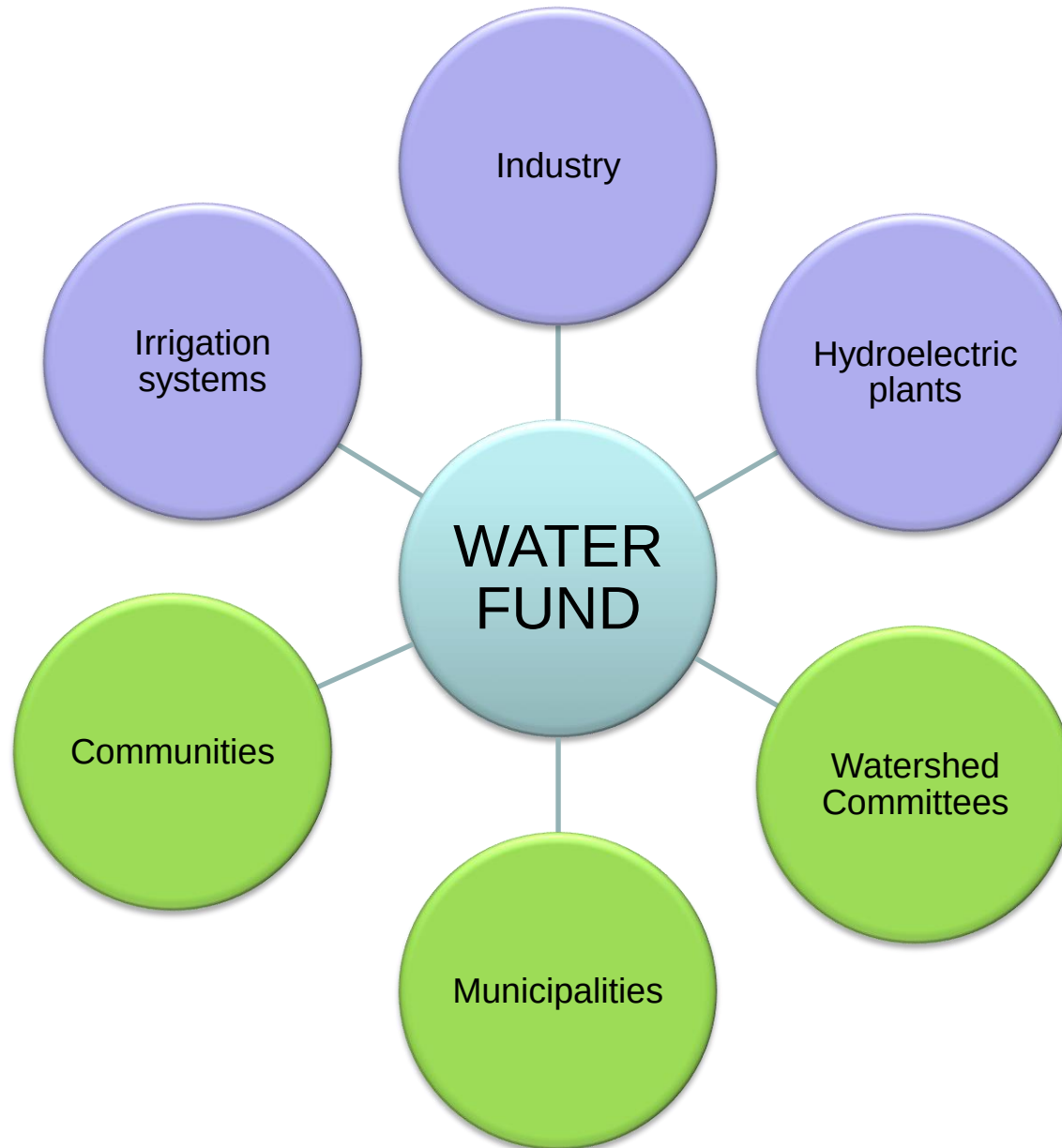


METHODOLOGY

Studies to guide
decision making
processes.



STRUCTURE



WATER AWARENESS



Assessment period

December

Continue to trending

Continue to best practices

Main Menu

Print

SELF ASSESSMENT - RESULTS

Production volume of final beverages

44,539 m³

Total water consumption in this period

84,539 m³

Fresh water

84,539 m³

Potable reuse

0 m³

Local reuse

0 m³

To see suppliers and score of potable reuse. Assess!

RESULTS WATER USE PER PROCESS

	Total water use	Water treatment	Bottle washer	Package rinsing	GP	Others, incl. g.d.	Small consumps
Total water consumption	84,539 m ³	22,829 m ³	4,276 m ³	4,000 m ³	4,200 m ³	1,970 m ³	2,798 m ³
Fresh water	84,518 m ³	22,829 m ³	4,276 m ³	4,000 m ³	4,200 m ³	1,970 m ³	2,798 m ³
Potable reuse	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³
Local reuse	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³
Supply of local AND potable reuse	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³	0 m ³
Water use with saving potential	73,000 m ³	4,000 m ³	3,900 m ³	4,000 m ³	3,900 m ³	5,500 m ³	5,600 m ³
Good performance range in your situation	67,000 m ³	3,100 m ³	3,000 m ³	3,700 m ³	3,900 m ³	5,100 m ³	4,500 m ³
Total water saving potential	21,000 m ³	18,279 m ³	626 m ³	0 m ³	850 m ³	0 m ³	0 m ³
Fresh water saving potential	21,000 m ³	18,279 m ³	626 m ³	0 m ³	850 m ³	0 m ³	0 m ³
Fresh water saving benefit in your situation	73,300 L	67,477 L	2,892 L	0 L	2,375 L	0 L	0 L
Your fresh water ratio	1.3	0.51	0.10	0.03	0.03	0.04	0.06
Your fresh water ratio	1.3	0.51	0.10	0.03	0.03	0.04	0.06
Good performance range in your situation	1.6	0.69	0.09	0.11	0.08	0.15	0.12

Water use

Is it high, low or average?

Value TOTAL water ratio

Value FRESH water ratio

Good performance range in your situation

Tuber water

Water treatment

Value TOTAL water ratio

Value FRESH water ratio

Good performance range in your situation

Bottle washer

Value TOTAL water ratio

Value FRESH water ratio

Good performance range in your situation

Package rinsing

Value TOTAL water ratio

Value FRESH water ratio

Good performance range in your situation

GP

Value TOTAL water ratio

Value FRESH water ratio

Good performance range in your situation

Others

Value TOTAL water ratio

Value FRESH water ratio

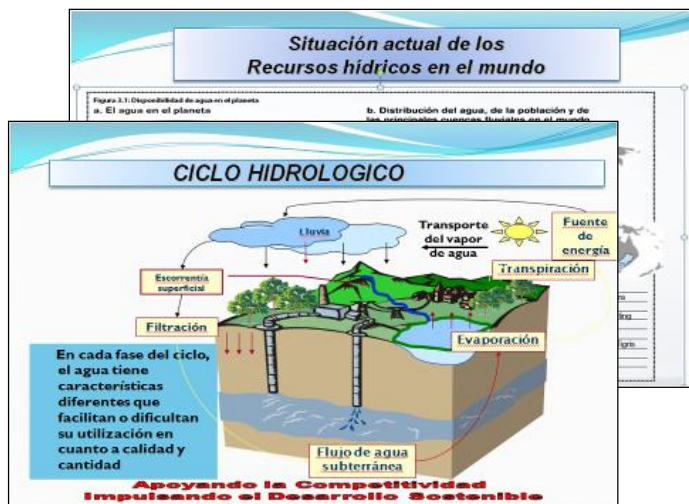
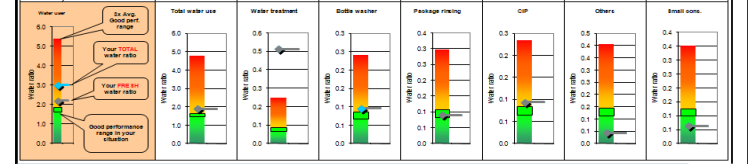
Good performance range in your situation

Small consumps

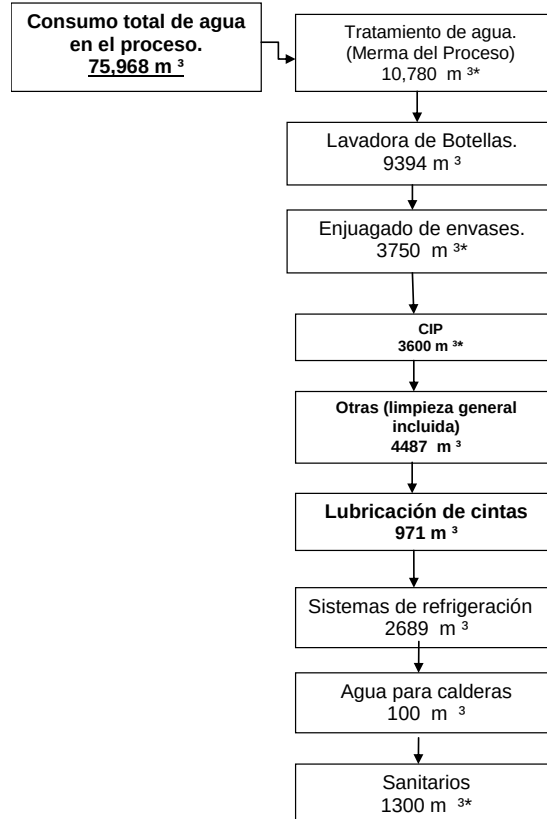
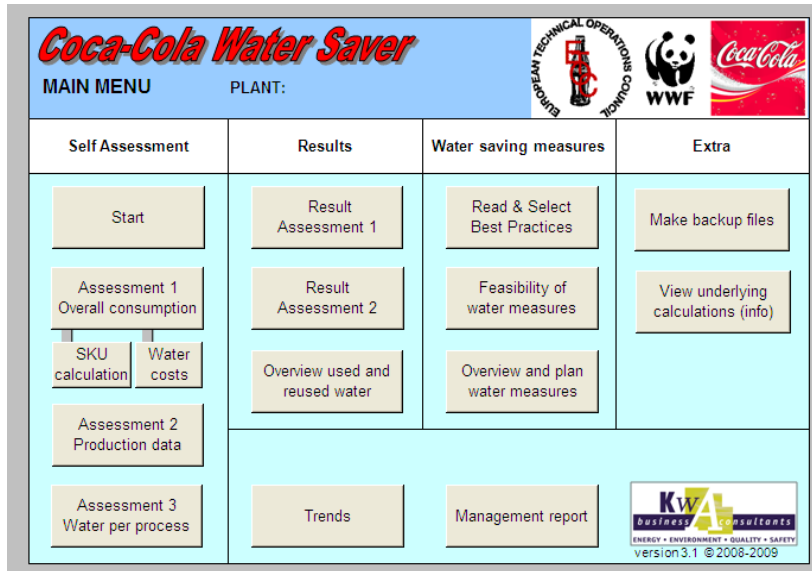
Value TOTAL water ratio

Value FRESH water ratio

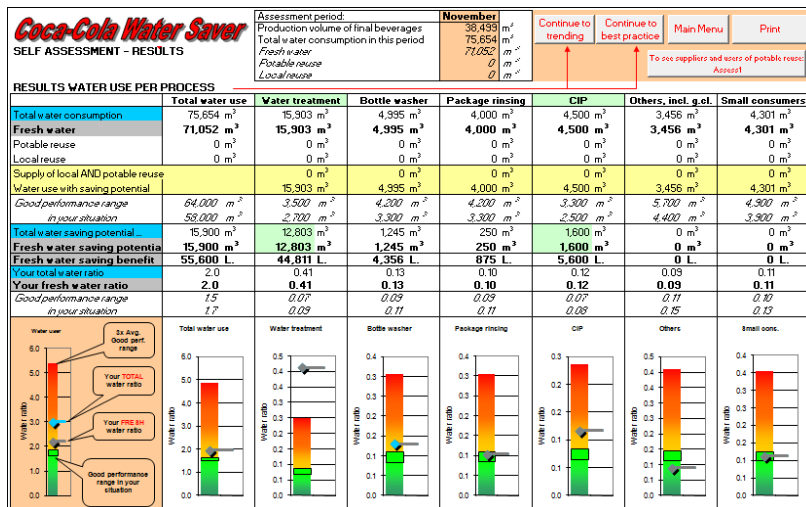
Good performance range in your situation



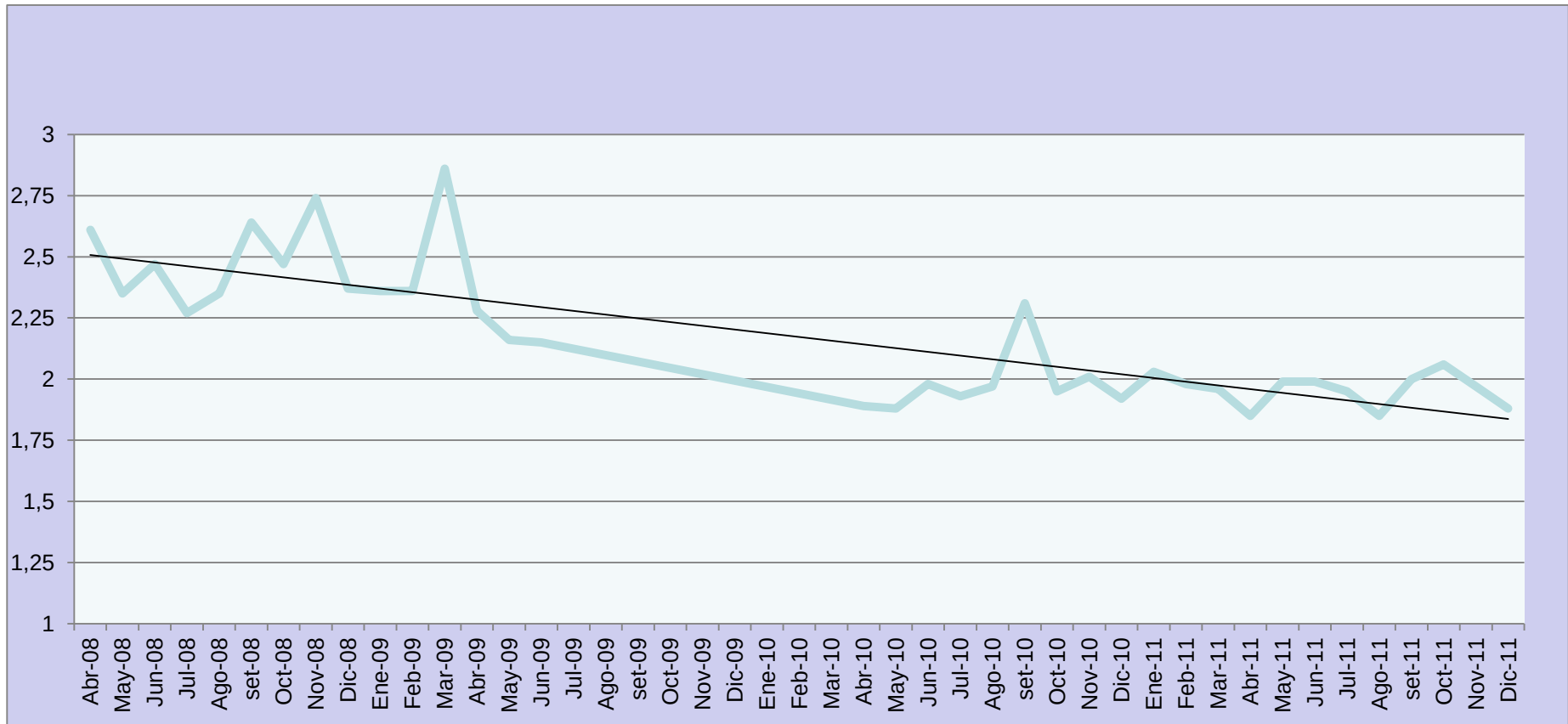
KNOWLEDGE OF IMPACT

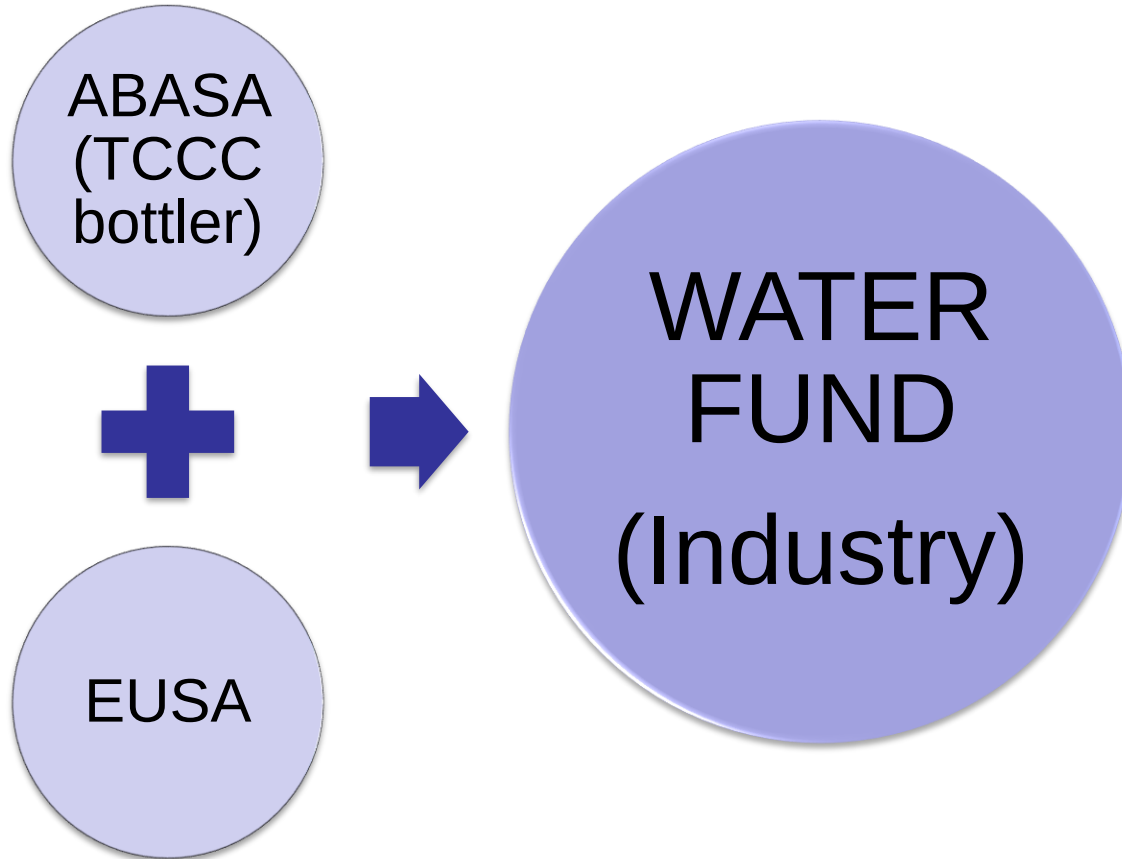


Consumo total de agua para bebidas 38,897 m³



INTERNAL ACTION





WATER FUND ACTIVITIES



COLLECTIVE ACTION

WHY ?

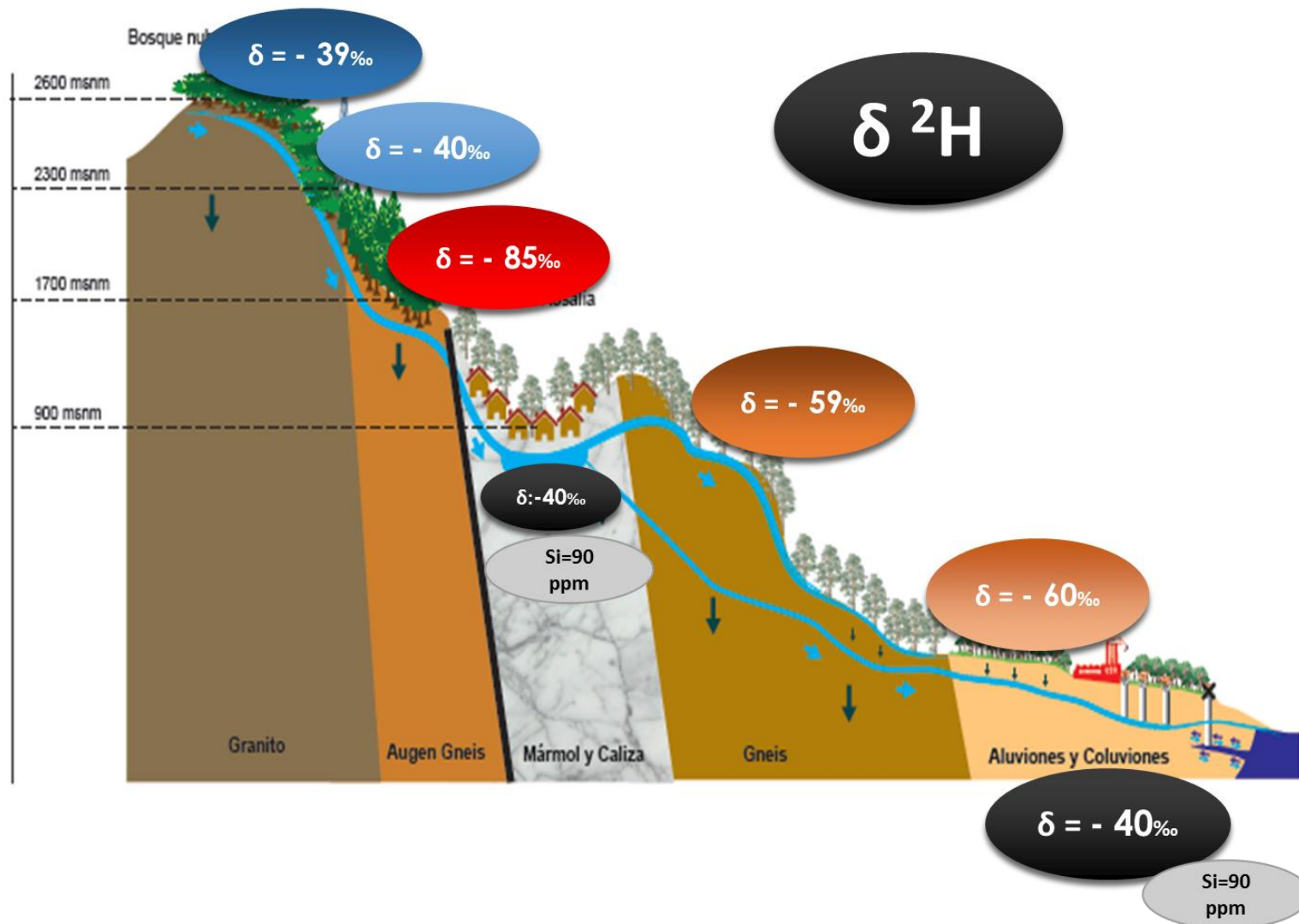
CORPORATE GUIDELINES

MARKET DEMANDS

REGULATORY COMPLIANCE

...???

Stable Isotopes Study



Stable Isotopes Study



Stable Isotopes Study - Communication



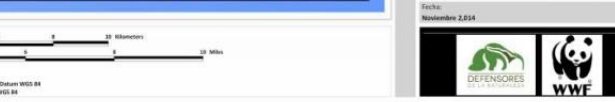
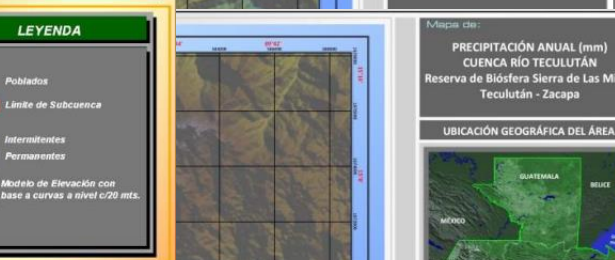
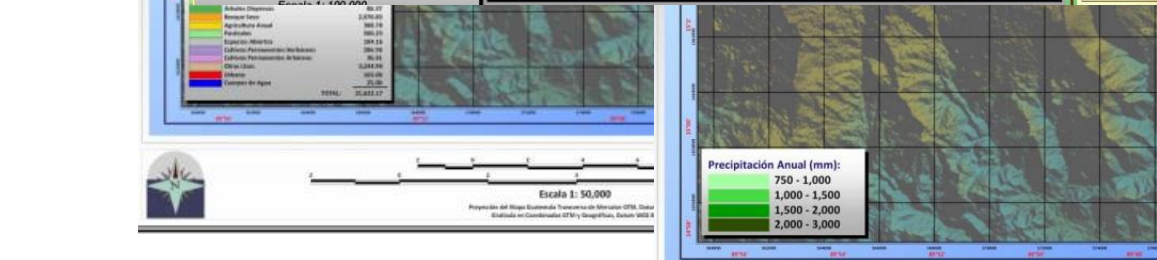
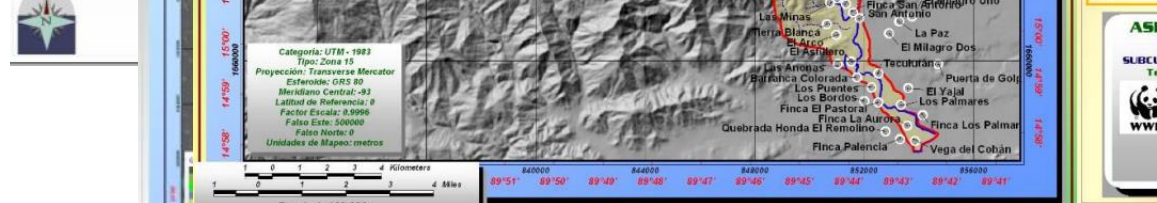
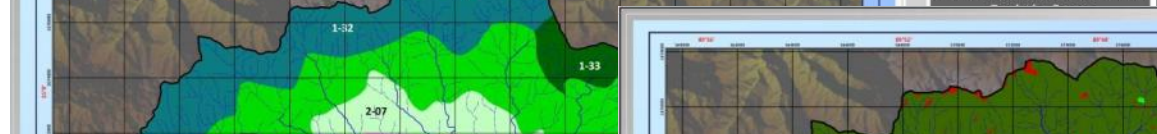
COLLECTIVE ACTION



Diagnóstico biofísico, socioeconómico y de elementos de gestión de la subcuenca Teculután, Reserva de la biosfera Sierra de las Minas, Guatemala

Juan Carlos Rosito M.

Guatemala mayo 2016



COLLECTIVE ACTION



COLLECTIVE ACTION



**Plan de Manejo de la cuenca Teculután, Reserva de la
Biosfera Sierra de las Minas, Guatemala**

Juan Carlos Rosito M.

Guatemala mayo 2016

Integrated Watershed Management



Integrated Watershed Management



Integrated Watershed Management



Integrated Watershed Management



Integrated Watershed Management



Integrated Watershed Management - Communication



INFLUENCE GOVERNANCE

ESTABLISHMENT OF MANAGEMENT COMMITTEE

**IMPLEMENTATION OF WATERSHED
MANAGEMENT PLAN**

MONITORING AND EVALUATION

PARTICIPATORY DECISION MAKING

THANKS FOR YOUR ATTENTION