

# Annexes

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# Annex II

## Detailed scoring tables Colombia-Venezuela sub-system (3b)

### I: Freshwater shortage

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
1. Modification of stream flow	1	20	Freshwater shortage	0.9
2. Pollution of existing supplies	0	70		
3. Changes in the water table	0	10		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	3	40
Degree of impact (cost, output changes etc.)	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	2	20
<b>Weight average score for Economic impacts</b>		<b>2</b>	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	2	30
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	1	30
<b>Weight average score for Health impacts</b>		<b>1.3</b>	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	1	30
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	2	30
<b>Weight average score for Other social and community impacts</b>		<b>1.3</b>	

### II: Pollution

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
4. Microbiological	1	15	Pollution	1.95
5. Eutrophication	1	5		
6. Chemical	2	15		
7. Suspended solids	2	20		
8. Solid wastes	2	5		
9. Thermal	1	5		
10. Radionuclides	0	5		
11. Spills	3	30		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	2	30
Degree of impact (cost, output changes etc.)	Minimum  Severe	2	50
Frequency/Duration	Occasion/Short  Continuous	2	20
<b>Weight average score for Economic impacts</b>		<b>2</b>	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	2	20
Degree of severity	Minimum  Severe	2	40
Frequency/Duration	Occasion/Short  Continuous	2	40
<b>Weight average score for Health impacts</b>		<b>2</b>	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	2	20
Degree of severity	Minimum  Severe	2	40
Frequency/Duration	Occasion/Short  Continuous	2	40
<b>Weight average score for Other social and community impacts</b>		<b>2</b>	

### III: Habitat and community modification

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
12. Loss of ecosystems	2	40	Habitat and community modification	2.6
13. Modification of ecosystems or ecotones, including community structure and/or species composition	2	60		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	3	25
Degree of impact (cost, output changes etc.)	Minimum  Severe	2	40
Frequency/Duration	Occasion/Short  Continuous	2	35
<b>Weight average score for Economic impacts</b>			<b>2.25</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	1	20
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	1	40
<b>Weight average score for Health impacts</b>			<b>1</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	3	30
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	1	30
<b>Weight average score for Other social and community impacts</b>			<b>1.6</b>

### IV: Unsustainable exploitation of fish and other living resources

Environmental issues	Score	Weight %	Environmental concern	Weight averaged score
14. Overexploitation	3	40	Unsustainable exploitation of fish	2.2
15. Excessive by-catch and discards	1	10		
16. Destructive fishing practices	2	25		
17. Decreased viability of stock through pollution and disease	1	10		
18. Impact on biological and genetic diversity	2	15		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	2	30
Degree of impact (cost, output changes etc.)	Minimum  Severe	2	50
Frequency/Duration	Occasion/Short  Continuous	3	20
<b>Weight average score for Economic impacts</b>			<b>2.2</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	2	30
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	1	30
<b>Weight average score for Health impacts</b>			<b>1.3</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	3	30
Degree of severity	Minimum  Severe	1	40
Frequency/Duration	Occasion/Short  Continuous	1	30
<b>Weight average score for Other social and community impacts</b>			<b>1.6</b>

## V: Global change

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
19. Changes in the hydrological cycle	2	50	Global change	1.5
20. Sea level change	1	20		
21. Increased UV-B radiation as a result of ozone depletion	1	10		
22. Changes in ocean CO <sub>2</sub> source/sink function	1	20		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	2	40
Degree of impact (cost, output changes etc.)	Minimum  Severe	1	50
Frequency/Duration	Occasion/Short  Continuous	3	10
<b>Weight average score for Economic impacts</b>			<b>1.6</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	2	40
Degree of severity	Minimum  Severe	1	50
Frequency/Duration	Occasion/Short  Continuous	3	10
<b>Weight average score for Health impacts</b>			<b>1.6</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	2	40
Degree of severity	Minimum  Severe	1	50
Frequency/Duration	Occasion/Short  Continuous	3	10
<b>Weight average score for Other social and community impacts</b>			<b>1.6</b>

## Comparative environmental and socio-economic impacts of each GIWA concern

Concern	Types of impacts								Overall score	Rank
	Environmental score		Economic score		Human health score		Social and community score			
	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)		
Freshwater shortage	0.90	0.90	2.00	2.00	1.30	1.10	1.30	0.80	1	5
Pollution	1.95	1.60	2.00	2.00	2.00	1.10	2.00	1.50	2	3
Habitat and community modification	2.60	2.60	2.25	2.30	1.00	0.50	1.60	2.00	2	1
Unsustainable exploitation of fish and other living resources	2.20	1.60	2.20	2.00	1.30	1.00	1.60	1.40	2	2
Global change	1.50	1.50	1.60	2.00	1.10	1.10	1.60	2.00	2	4

# Annex II

## Detailed scoring tables Central America & Mexico sub-system (3c)

### I: Freshwater shortage

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
1. Modification of stream flow	3	40	Freshwater shortage	1.8
2. Pollution of existing supplies	2	20		
3. Changes in the water table	1	20		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	2	30
Degree of impact (cost, output changes etc.)	Minimum  Severe	3	50
Frequency/Duration	Occasion/Short  Continuous	2	20
<b>Weight average score for Economic impacts</b>			<b>2.5</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	1	30
Degree of severity	Minimum  Severe	3	50
Frequency/Duration	Occasion/Short  Continuous	1	20
<b>Weight average score for Health impacts</b>			<b>2</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	2	30
Degree of severity	Minimum  Severe	3	60
Frequency/Duration	Occasion/Short  Continuous	2	10
<b>Weight average score for Other social and community impacts</b>			<b>2.6</b>

### II: Pollution

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
4. Microbiological	1	5	Pollution	2.6
5. Eutrophication	2	10		
6. Chemical	3	30		
7. Suspended solids	3	20		
8. Solid wastes	2	10		
9. Thermal	1	5		
10. Radionuclides	0	0		
11. Spills	3	20		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	3	40
Degree of impact (cost, output changes etc.)	Minimum  Severe	3	40
Frequency/Duration	Occasion/Short  Continuous	2	20
<b>Weight average score for Economic impacts</b>			<b>2.8</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	1	20
Degree of severity	Minimum  Severe	3	40
Frequency/Duration	Occasion/Short  Continuous	3	40
<b>Weight average score for Health impacts</b>			<b>2.6</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	2	25
Degree of severity	Minimum  Severe	3	55
Frequency/Duration	Occasion/Short  Continuous	1	20
<b>Weight average score for Other social and community impacts</b>			<b>2.35</b>

### III: Habitat and community modification

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
12. Loss of ecosystems	3	50	Habitat and community modification	3
13. Modification of ecosystems or ecotones, including community structure and/or species composition	3	50		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	3	30
Degree of impact (cost, output changes etc.)	Minimum  Severe	3	40
Frequency/Duration	Occasion/Short  Continuous	3	30
<b>Weight average score for Economic impacts</b>			<b>3</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	1	34
Degree of severity	Minimum  Severe	1	33
Frequency/Duration	Occasion/Short  Continuous	1	33
<b>Weight average score for Health impacts</b>			<b>1</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	1	20
Degree of severity	Minimum  Severe	3	40
Frequency/Duration	Occasion/Short  Continuous	3	40
<b>Weight average score for Other social and community impacts</b>			<b>2.6</b>

### IV: Unsustainable exploitation of fish and other living resources

Environmental issues	Score	Weight %	Environmental concern	Weight averaged score
14. Overexploitation	3	50	Unsustainable exploitation of fish	2.6
15. Excessive by-catch and discards	0	0		
16. Destructive fishing practices	3	30		
17. Decreased viability of stock through pollution and disease	1	10		
18. Impact on biological and genetic diversity	1	10		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	1	40
Degree of impact (cost, output changes etc.)	Minimum  Severe	1	50
Frequency/Duration	Occasion/Short  Continuous	1	10
<b>Weight average score for Economic impacts</b>			<b>1</b>
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	0	0
Degree of severity	Minimum  Severe	0	0
Frequency/Duration	Occasion/Short  Continuous	0	0
<b>Weight average score for Health impacts</b>			<b>0</b>
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	2	20
Degree of severity	Minimum  Severe	2	40
Frequency/Duration	Occasion/Short  Continuous	3	40
<b>Weight average score for Other social and community impacts</b>			<b>2.4</b>

## V: Global change

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
19. Changes in the hydrological cycle	2	40	Global change	1.8
20. Sea level change	2	40		
21. Increased UV-B radiation as a result of ozone depletion	0	0		
22. Changes in ocean CO <sub>2</sub> source/sink function	1	20		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small  Very large	3	33
Degree of impact (cost, output changes etc.)	Minimum  Severe	3	34
Frequency/Duration	Occasion/Short  Continuous	3	33
<b>Weight average score for Economic impacts</b>		<b>3</b>	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small  Very large	2	30
Degree of severity	Minimum  Severe	2	60
Frequency/Duration	Occasion/Short  Continuous	3	10
<b>Weight average score for Health impacts</b>		<b>2.1</b>	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small  Very large	3	33
Degree of severity	Minimum  Severe	3	34
Frequency/Duration	Occasion/Short  Continuous	3	33
<b>Weight average score for Other social and community impacts</b>		<b>3</b>	

## Comparative environmental and socio-economic impacts of each GIWA concern

Concern	Types of impacts								Overall score	Rank
	Environmental score		Economic score		Human health score		Social and community score			
	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)		
Freshwater shortage	1.80	2.50	2.50	3.00	2.00	2.00	2.60	3.00	2.43	4
Pollution	2.60	2.10	2.80	3.00	2.60	2.40	2.35	2.00	2.48	2
Habitat and community modification	3.00	2.80	3.00	2.80	1.00	1.00	2.60	2.00	2.27	1
Unsustainable exploitation of fish and other living resources	2.60	3.00	1.00	2.00	0.00	2.30	2.40	2.60	1.99	3
Global change	1.80	3.00	3.00	3.00	2.10	3.00	3.00	3.00	2.74	5

## Annex III

# Protocols of the Cartagena Convention

The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) was adopted in Cartagena, Colombia, in March 1983 and entered into force in October 1986, for the legal implementation of the Action Plan for the Caribbean Environment Programme (UNEP/CEP 1983). The Cartagena Convention has been supplemented by three Protocols, described below, in respect of Cooperation in Combating Oil Spills, Specially Protected Areas and Wildlife, and Pollution from Land-Based Sources and Activities.

### **The Protocol Concerning Cooperation in Combating Oil Spills**

The Protocol was also adopted in 1983 and entered into force in October 1986. This Protocol applies to oil spill incidents which have resulted in, or which pose a significant threat of, pollution to the marine and coastal environment of the Wider Caribbean Region or which adversely affect the related interests of one or more of the Contracting Parties. The Parties shall, within their capabilities, cooperate in taking all necessary measures, both preventive and remedial, for the protection of the marine and coastal environment of the Wider Caribbean, particularly the coastal areas of the islands of the region, from oil spill incidents. The Parties shall, within their capabilities, establish and maintain, or ensure the establishment and maintenance of the means of responding to oil spill incidents and shall endeavour to reduce the risk thereof. Such means shall include the enactment, as necessary, of relevant legislation, the preparation of contingency plans, the identification and development of the capability to respond to an oil spill incident and the designation of an authority responsible for the implementation of this Protocol.

### **The Protocol Concerning Specially Protected Areas and Wildlife (SPAW)**

The Protocol was adopted in January 1990 and entered into force in June 2000, and there have already been 11 COP. Every Party to this Protocol shall, in accordance with its laws and regulations and the terms of the Protocol, take the necessary measures to protect, preserve and manage in a sustainable way, within areas of the Wider Caribbean re-

gion in which it exercises sovereignty, or sovereign rights or jurisdiction: (i) areas that require protection to safeguard their special value; and (ii) threatened or endangered species of flora and fauna. Each Party shall regulate and, where necessary, prohibit activities having adverse effects on these areas and species. Each Party shall endeavour to cooperate in the enforcement of these measures, without prejudice to the sovereignty, or sovereign rights or jurisdiction of other Parties. Each Party, to the extent possible, consistent with each Parties's legal system, shall manage species of fauna and flora with the objective of preventing species from becoming endangered or threatened.

### **The Protocol Concerning Marine Pollution from Land-Based Sources and Activities (LBS)**

The adoption of this Protocol took place in October 1999 in Aruba. Sixteen Member States signed the Final Act to adopt the Protocol, and six (Colombia, Costa Rica, Dominican Republic, France, the Netherlands, and the United States of America) have signed the Protocol itself. The protocol will enter into force after it has been ratified by nine Member States following 2 COP. Each country shall, in accordance with its laws, the provisions of this Protocol, and international law, take appropriate measures to prevent, reduce and control pollution of the Convention area from land-based sources and activities, using for this purpose the best practicable means at its disposal and in accordance with its capabilities. Each country shall develop and implement appropriate plans, programmes and measures. In such plans, programmes and measures, each country shall adopt effective means of preventing, reducing or controlling pollution of the Convention area from land-based sources and activities on its territory, including the use of most appropriate technology and management approaches such as integrated coastal area management. Countries shall, as appropriate, and having due regard to their laws and their individual social, economic and environmental characteristics and the characteristics of a specific area or sub-region, jointly develop sub-regional and regional plans, programmes and measures to prevent, reduce and control pollution of the Convention area from land-based sources and activities.