

## MASTER

### Towards a knowledge based web design for structured decision-making a design-oriented research project in an inter-governmental organisation

Pak, F.

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# Towards a knowledge based web design for structured decision-making

## Appendices

*A design-oriented research project in an inter-governmental  
organisation*

(1J306)

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**NIET  
UITLEENBAAR**

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## Appendix A Organisational Composition

The three separate, but related parts of the OPCW are discussed in Chapter 1. The relationship between these parts and OPCW organs can be seen in Figure A1.1.

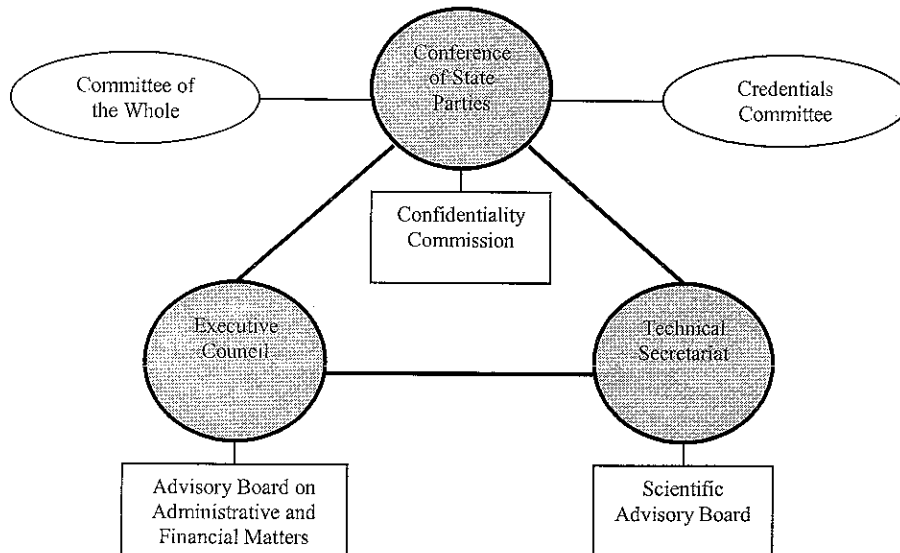


Figure A1 1: Organs, Subsidiary Organs and Bodies of the OPCW

The OPCW has three statutory organs:

- The Confidentiality Commission.  
Commission for the settlements of disputes related to confidentiality, which has twenty members appointed by the Conference.
- The Scientific Advisory Board.  
The main work is done by temporary work groups, for a short term or a longer term, which address scientific and technical questions raised by State Parties or the policy making organs of the OPCW or which are of concern to the Director-General. Twenty eminent scientists, who are appointed by the Director-General of the Secretariat, make up the Scientific Advisory Board.
- Advisory Board on Administrative and Financial Matters.

In addition, the Conference is authorized to establish such subsidiary organs as it finds necessary for the exercise of functions. On the basis of this authority the Conference has established several committees. Two of which are appointed at the beginning of each regular session of the Convention:

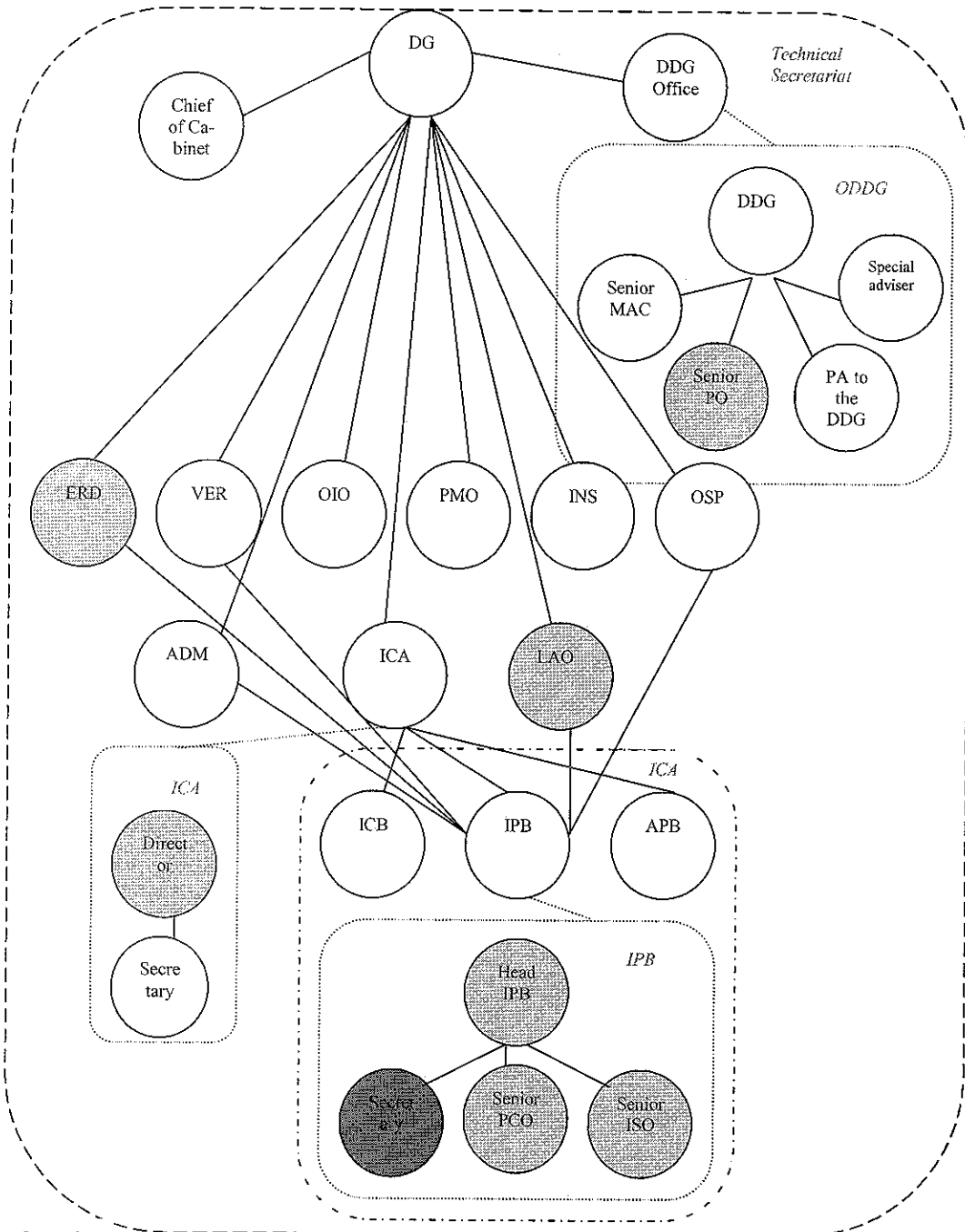
- Committee of the Whole.  
This committee serves as the forum for the discussion of issues, which are not yet ripe for decision-making, and which accordingly require consultations and discussion involving all members in attendance at the session.
- Credentials Committee.  
This committee is required to examine the credentials of all representatives attending the Convention.

## Appendix B Technical Secretariat

The different divisions of the Technical Secretariat of the OPCW with their branches are the following:

- ADM: Administration Division
  - BFB: Budget and Finance Branch.
  - HRB: Human Resource Branch.
  - ISB: Information System Branch.
  - PSB: Procurement and Support Services Branch.
  - TDB: Training and Staff Development Branch.
  
- ERD: External Relations Division
  - GRB: Government Relations and Political Affairs Branch
  - MPB: Media and Public Affairs Branch.
  - PVB: Protocol Branch.
  
- INS: Inspectorate Division
  - OPB: Operations and Planning Branch.
  - IMP: Inspectorate Management Branch.
  - IRB: Inspection/Home Team Leaders Branch.
  
- ICA: International Cooperation and Assistance Division
  - IPB: Implementation Support Branch.
  - ICB: International Cooperation Branch.
  - APB: Assistance and Protection Branch.
  
- OIO: Office of Internal Oversight
  
- LAO: Office of the Legal Adviser
  
- PMO: Secretariat for the Policy Making Organs
  - CSB: Conference Services Branch.
  
- OSP: Division of Special Projects
  - HSB: Health and Safety Branch.
  - OCS: Office of Confidentiality and Security.
  
- VER: Verification Division
  - CDB: Chemical Demilitarisation Branch.
  - DEB: Declarations Branch.
  - IVB: Industry Verification Branch.
  - PRB: Policy and Review Branch.
  - TSB: Technical Support Branch.

## Appendix C Collection of Data



**Legend**

- Elements; people or groups of people
- ◐ Representative of this division interviewed during design
- Relationship between elements
- - - System Sublevel 1
- Person interviewed during the diagnosis
- ◑ Person interviewed during diagnosis and design
- - - System boundary
- ..... System Sublevel 2

PCO = Planning/Coordination Officer  
 ISO = Implementation Support Officer

PO = Planning Officer  
 MAC = Management Assistance Clerk

PA = Personal Assistant

Figure C1 1: People interviewed, presented in system-behaviour representation of the Secretariat.

## Appendix D Diagnostic Phase: Analysis of Data

An organisation is defined by different aspects. Three of these aspects are behaviour, function and structure. Looking at these aspects in various combinations the organisational processes can be described.

- System-Behaviour (Van Eijnatten & Van der Zwaan, 1998; J.J. Buijse et al., 1986)

This combination represents the organisation in terms of elements, their attributes and their relationships, as is done in socio-technical models. At the lowest level an element is always a person, at higher levels elements can be groups of people in some form. Attributes can be information, machines, skills etc. needed by elements in order to perform their tasks. By zooming in at system level, subsystems can be discovered. When zooming out the super-system comes into focus. A system can be open or closed in nature. An open system interacts with its environment, a closed system does not. Open systems are more common. A system boundary is the dividing line between the system and its environment. Outside the system, only elements, which have relationships with elements inside the system, are represented. The System-Behaviour representation resembles an organisational chart. For the results of this organisational systems representation in regard to the OPCW, see Figures D3.1 and D3.2.

- System-Function (De Leeuw, 1990)

In this representation people or groups of people are arranged according to their function as managing organ or managed system. Different process levels occur because managing organs become managed systems, because they are managed by other organs in a hierarchical way up to the highest level. The System-Function representation for the OPCW is described in Figure D3.3.

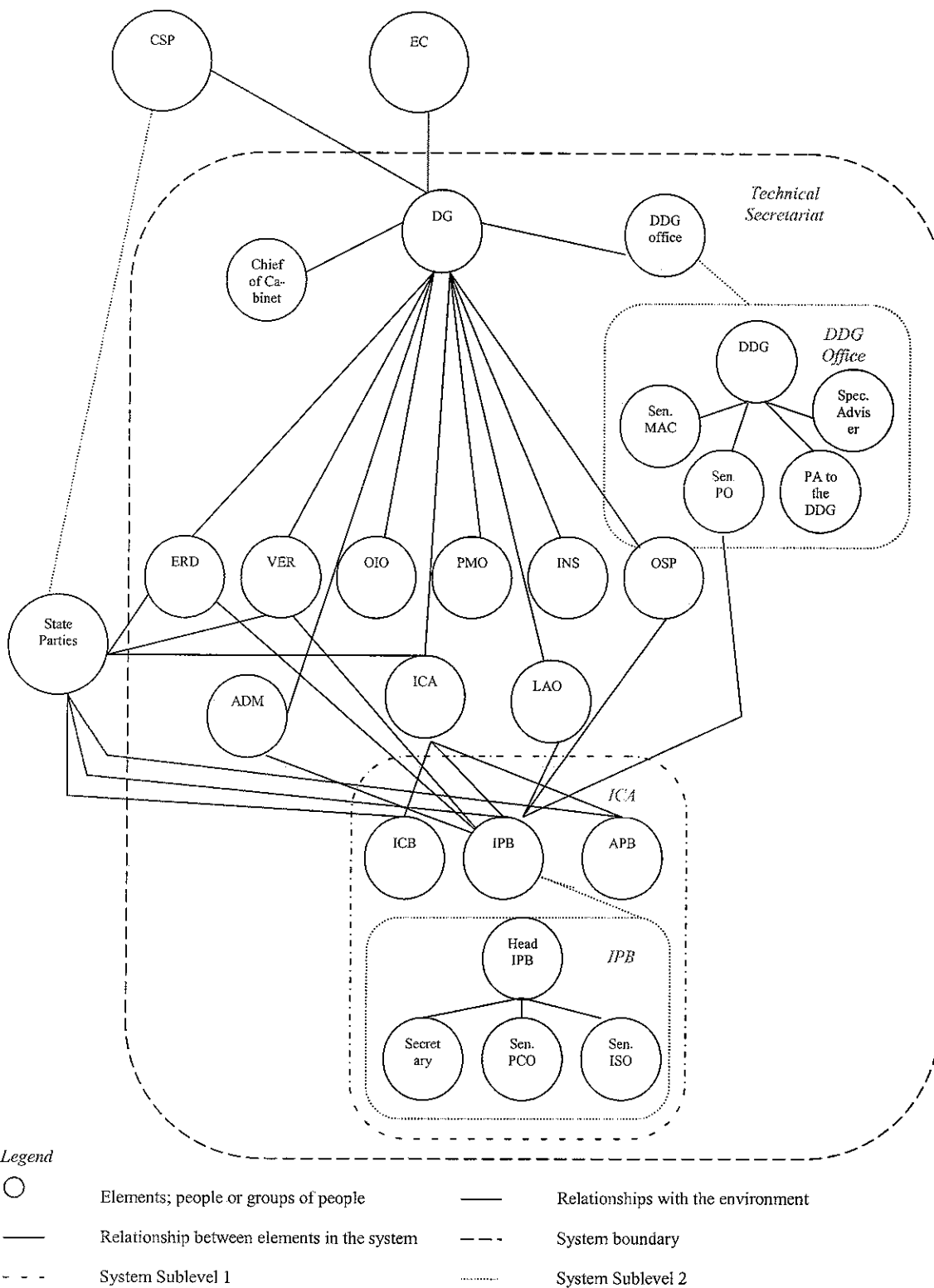


Figure D3.1: System-behaviour representation of the Technical Secretariat



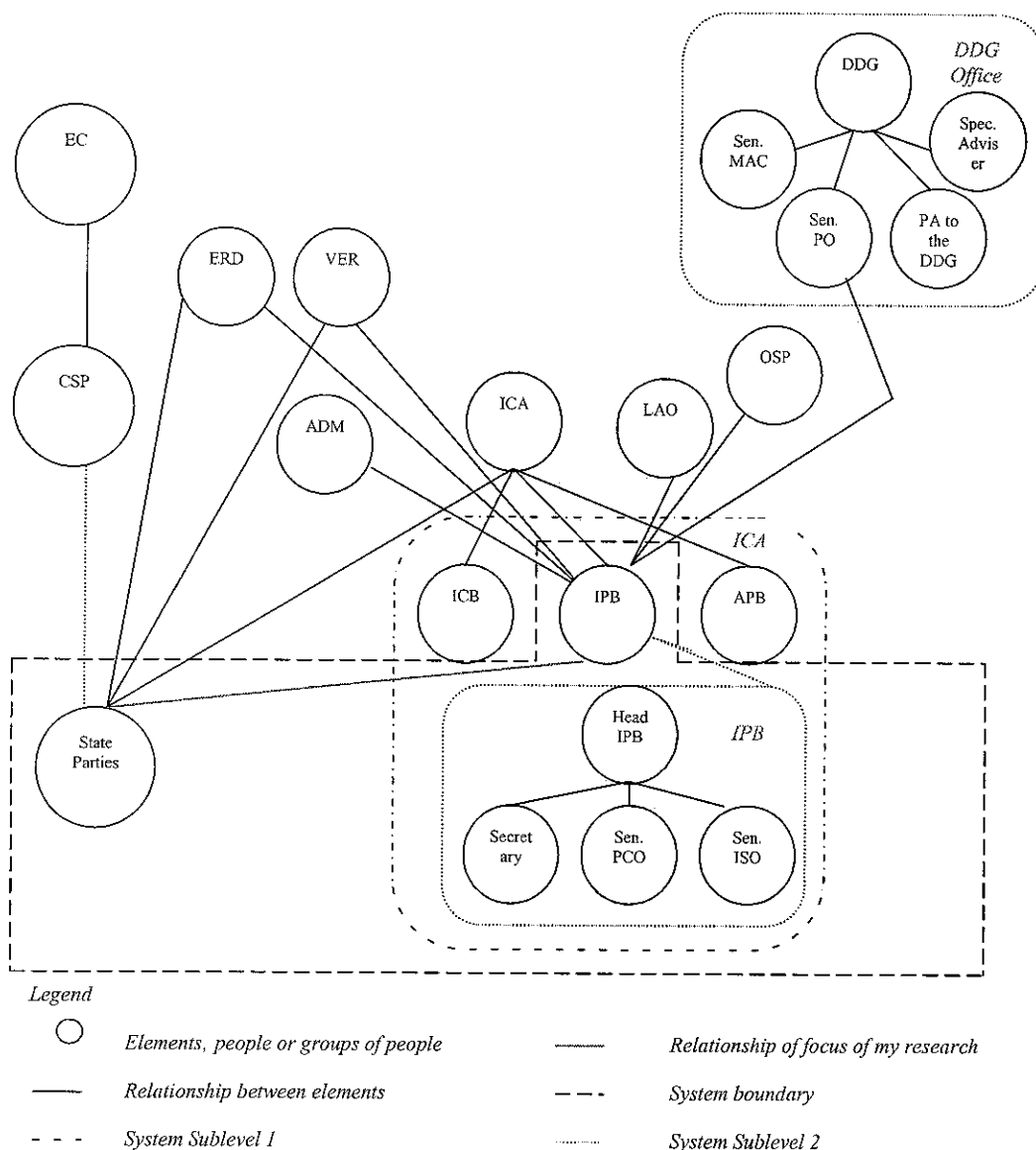
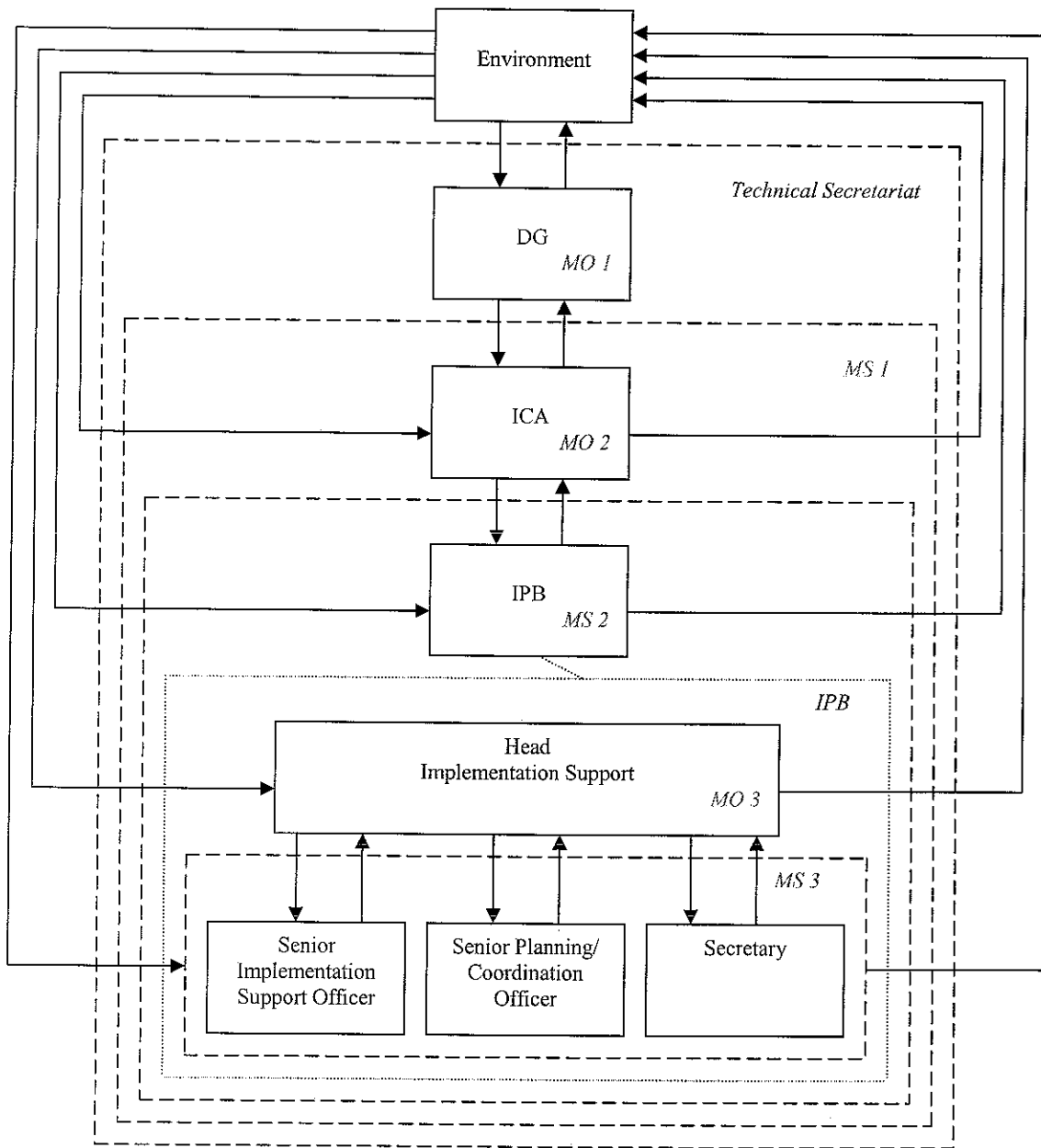


Figure D3 2: System-behaviour representation of the IPB and State Parties

EC	Executive Council
CSP	Conference of States Parties
DG	Director General
DDG	Deputy Director General
Spec. Adviser	Special Adviser to the DDG
Sen. MAC	Senior Management Assistance Clerk
Sen. PO	Senior Planning Officer
PA	Personal Assistant
Sen. PCO	Senior Planning/Coordination Officer
Sen. ISO	Senior Implementation Support Officer



Legend

MO	=	Managing Organ
MS	=	Managed System
---	=	Different process level (marked 1 to 3)
.....	=	Different system level

Figure D3 3 System-Function representation of the Secretariat

## Appendix E Design phase: Analysis of Data

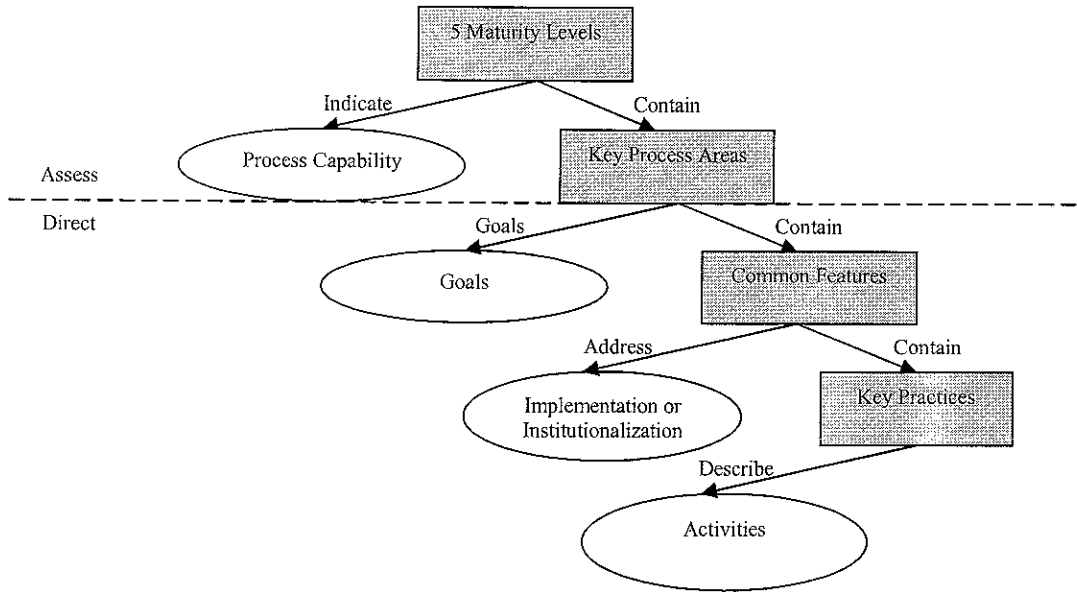


Figure D1.2: The CMM Structure  
(Based on: Paulk et al , 1995· page 24)

## Appendix F General Data

In the interview schedule the topics discussed during the diagnostic phase, are linked with the participants of the interviews. This is shown in Table F1.1.

Some characteristics of the people interviewed are presented in Table F1.2.

Table F1.1. Interview schedule

Division/Branch	DDG	ICA	ICA/IPB	ICA/IPB	ICA/IPB	ICA/IPB
Function	Planning Officer	Division Director	Branch Head	Senior Planning/ Coordination Officer	Senior Implementation Support Officer	Secretary
Organisation		X	X	X	X	
CWC	X			X	X	
Member States	X	X	X	X	X	
Implementation Difficulties	X	X	X	X	X	X
Action Plan	X	X	X	X	X	
Assistance	X	X	X	X	X	X
NIPS		X	X	X	X	
Culture	X	X	X	X	X	

Table 1.2. Characteristics of interviewees in diagnostic phase

Position	Country of Origin	Gender
Senior Planning Officer	Germany	M
Division Director	Zimbabwe	M
Branch Head	Cuba	F
Senior Planning/ Coordination Officer	Russia	M
Senior Implementation Support Officer	India	M
Secretary	Argentina	F

## Appendix G National Implementation Profile System

In Figure G1.1 the main page of information about a fictive State Party in the original NIPS database is presented.

NIPS		Search	Administration	Organisatie
<b>NIPS Maintenance</b>				
State Party: <input type="text"/>		<input type="button" value="Go"/>		
Summary: general profile		Territory: 505,988 (sq km) Population: 42,717,064 (2003 estimate) G.D.P: 696,208 (Euro Million at current Prices)		
1. Entry into Force	29/04/1997	11. Declarations	Initial <input checked="" type="checkbox"/> Annual <input type="checkbox"/>	
2. National Legislation	<input checked="" type="checkbox"/> Comprehensive? <input checked="" type="checkbox"/>	12. Inspections	<input checked="" type="checkbox"/>	
3. Privileges & Immunities Agreement	Date: 16/09/2003 <input type="button" value="Go"/>	13. Facility Agreement	<input checked="" type="checkbox"/>	
4. Financial Assessment Status	<input type="text"/> <input type="button" value="Go"/>	14. Elected Positions	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	
5. No. of Staff	12 <input type="button" value="Go"/>	15. Protection - Art X (4)	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	
6. POE	<input checked="" type="checkbox"/>	16. Assistance - Art X (7)	<input type="checkbox"/>	
7. SOCN	<input checked="" type="checkbox"/> Expired: <input type="text"/> <input type="button" value="Go"/>	17. National Authority	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	
8. Visits from OPCW	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	18. Network of Legal Experts	<input checked="" type="checkbox"/>	
9. Links	<input type="checkbox"/>	19. OPCW Events	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	
10. Article III	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	20. State Party Events	<input checked="" type="checkbox"/> <input type="button" value="Go"/>	
		21. Details on the Handling of Confidential Information	<input checked="" type="checkbox"/>	
<input type="button" value="Report"/>	<input type="button" value="Country Based number"/>	<input type="button" value="Save"/>	<input type="button" value="Remove from NIPS"/>	

Figure G1 1 Main page of fictive State Party in NIPS database

In Figure G1 2 an example of a combination of information parameters of different States Parties, as a result of a query in the original search feature of the NIPS database is presented.

Search NIPS

Advanced search

Region		Western Europe and other nations	
1. Entry Into Force (EIF)	<input type="text"/> to <input type="text"/>	11. Initial Declaration (ID) Annual Declaration (AD)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
2. National Legislation (NL) (Comprehensive?)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All <input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	12. Inspections (I)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
3. Privileges & Immunities Agreement. (PI)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All <input type="text"/> to <input type="text"/>	13. Facility Agreement (FA)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
4. Financial Assessment Status (F)	<input type="text"/> to <input type="text"/>	14. Elected Positions (EP)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
5. No. of Staff (S)	<input type="text"/> to <input type="text"/> 0	15. Protection - Art X 4 (P)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
6. PO	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	16. Assistance - Art X 7 (A)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
7. SD	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	17. National Authority (NA)	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> All
8. Visits to/from OPCW (V)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	18. Network Legal Experts (LE)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
9. Links (L)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	19. OPCW Events (OE)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
10. Article VII (AR)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All	20. State Party Events (SE)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All
<input checked="" type="radio"/> Highlight selected columns <input type="radio"/> Show only selected columns <input type="radio"/> Show all columns		21. Details on the Handling of Confidential Information (CI)	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> All

11 record(s) found

State Party	1 EIF	2 NL	2 C	3 PI	4 Finance	5 S	6 PO	7 SD	8 V	9 L	10 AR	11 ID	11 AD	12 I	13 FA	14 EP	15 P	16 A	17 NA	18 LE	19 OE	20 SE	21 CI
Andorra	2003	x					x				x	x							x				
Cyprus	1998	x	x				x	x	x		x	x							x		x		
Denmark	1997	x	x				x	x			x	x		x			x	x	x		x		x
Holy See	1999	x	x				x	x			x	x							x				x
Iceland	1997	x					x	x			x	x							x		x		
Liechtenstein	1999	x	x				x	x			x	x						x	x				
Luxembourg	1997	x					x	x			x	x						x	x		x		
Malta	1997	x	x	x			x	x	x		x	x					x	x	x		x	x	
Monaco	1997	x	x				x	x			x	x							x		x		x
Norway	1997	x	x				x	x			x	x		x	x	x	x	x	x	x	x	x	x
San Marino	2000	x					x	x			x	x							x				
		11	7	1		0	11	10	2	0	11	11	0	2	1	1	3	5	11	1	7	2	4

1. EIF Date: Entry Into Force Date; 2. NL (C): National Legislation (Comprehensive); 3. PI: Privileges and Immunities Agreement;  
 4. Finance: Outstanding assessed contributions; 5. S: Staff; 6. PO: Point Of Entry; 7. SD: Standing Diplomatic Clearance Number;  
 8. V: Visits; 9. L: Links; 10. AR: Article VII; 11 ID: Initial Declaration; 11 AD: Annual Declaration;  
 12. I: Inspections; 13. FA: Facility Agreement; 14. EP: Elected Positions; 15. P: Protection;  
 16. A: Assistance; 17. NA: National Authority; 18. LE: Network of Legal Experts; 19. OE: OPCW Events; 20. SE: State Party Events;  
 21. CI: Details on the Handling of Confidential Information

Figure G 1.2. Example of a query in the search feature of NIPS

## Appendix H Analysis

In the diagnostic phase the gathered data was analysed. Hereby organisational difficulties, root causes and a final symptom were identified. These were linked in an initial causal diagram, which is shown in Figure H1.1. Some root causes and the organisational difficulties following from the root causes could not be easily influenced or solved by the Secretariat or States Parties in the context of the work of the Secretariat. These were set outside the system boundary of the causal diagram, which can be seen in Figure H1.2. The root causes, inside the system boundary are discussed in the report in Paragraph 5.2. The root causes which fell outside the system boundary are:

- Lack of funding  
Due to a lack of funding the Secretariat is not able to provide all the desired support in the form of providing resources for States Parties, organising all desired meetings and workshops and sponsoring more applicants for meetings and workshops. Per States Party applying for a meetings or workshop, there are between one and four candidates. The Secretariat is usually not able to sponsor more than one or two participants per States Party. In this way, few people per country are able to attend and gain knowledge at a meeting or workshop.
- High turnover at positions within States Parties.  
When positions experience high turnover and knowledge is not consolidated within the States Parties, it can result in knowledge leaving the organisation together with the person.
- States Parties have to deal with other issues.  
When States Parties have to battle issues as hunger, disease, war and poverty, the CWC is of lesser importance.

After the setting of system boundaries, as shown in Figures H1.1 and H1.2., the organisational difficulties which remained were divided by the origin of the problem. The organisational difficulties are the following:

### OPCW difficulties

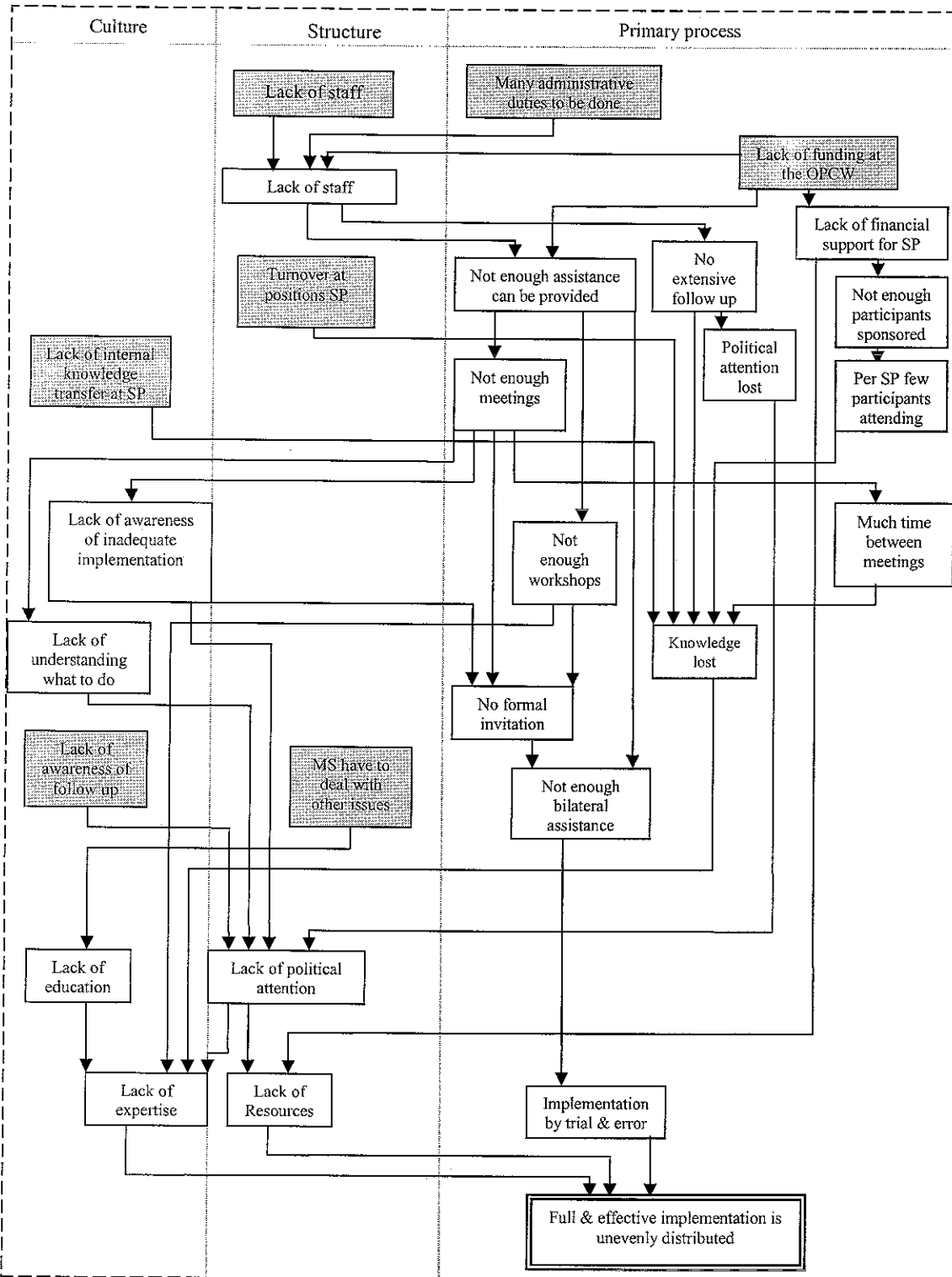
- Not enough bilateral meetings  
Bilateral meetings address the specific needs and problems of States Parties.
- No formal invitation  
States Parties are sovereign. This makes it difficult for the Secretariat to have a direct reach and tell States Parties what to do and how to do it. It also prevents the Secretariat to provide assistance without a formal invitation. This can result in a longer trajectory of implementation, when States Parties are implementing by trail and error.
- Not enough workshops  
Through workshops, expertise is build and invitations for assistance are gathered.
- Not enough meetings  
Through meetings awareness and understanding of the requirements is raised.

- Not enough assistance can be provided  
All kinds of assistance to States Parties regarding implementation of the CWC can not be provided.
- No extensive follow up  
Extensive follow up after meetings and workshops enhances their impact which is of great importance. To do an extensive follow up on States Parties can be difficult, because of lack of time, personnel and available funding.
- Political attention lost  
When a (bilateral) meeting or workshops has taken place the political attention is raised. Without extensive follow up this attention may be lost again.
- Lack of awareness of inadequate implementation  
States Parties are sometimes not aware their implementation is inadequate.

#### States Parties difficulties

- Lack of resources  
States Parties do not have enough equipment, skilled personnel and money necessary for implementation, or do not fully equip the organisation responsible for implementation in their country with the necessary resources. For example: In order for States Parties to benefit from provided software, they will have to have hardware available. Some States Parties have few resources in the form of computers available at their National Authority.
- Lack of political attention  
When States Parties have other priorities such as war or poverty, the CWC is not high on their political agenda. Subsequently, the resources and personnel necessary for implementation will not always be provided.
- Implementation by trial and error  
States Parties do not always ask for help when they need it. They implement the requirements under the CWC by trial and error, which is time consuming.
- Lack of general education  
In most developing countries, many people have no general education. Even fewer people have an advanced education or the necessary expertise to implement the CWC.
- Lack of expertise  
States Parties lack capacity. They do not have enough skilled and experienced people.
- Knowledge lost  
The participants of meetings and workshops acquire knowledge and experience regarding the CWC and its implementation. This knowledge can get lost. Since also basic knowledge can be lost, States Parties can have difficulties to benefit from advanced level workshops.
- States Parties have to deal with other issues  
Many countries are battling hunger, war, diseases and poverty. These subjects are of more importance to them than implementation of the CWC.
- Lack of understanding what to do  
It is not always clear to States Parties what the CWC requirements entail.
- Lack of awareness of follow up  
States Parties are not always aware that after ratification follow up for implementation is required.





- |        |   |                           |       |                 |
|--------|---|---------------------------|-------|-----------------|
| Legend | □ | Organisational difficulty | —     | Relation        |
|        | ■ | Root cause                | - - - | System boundary |
|        | □ | Symptom                   | SP    | State Party     |

Figure H1.1 Initial causal diagram with initial system boundary

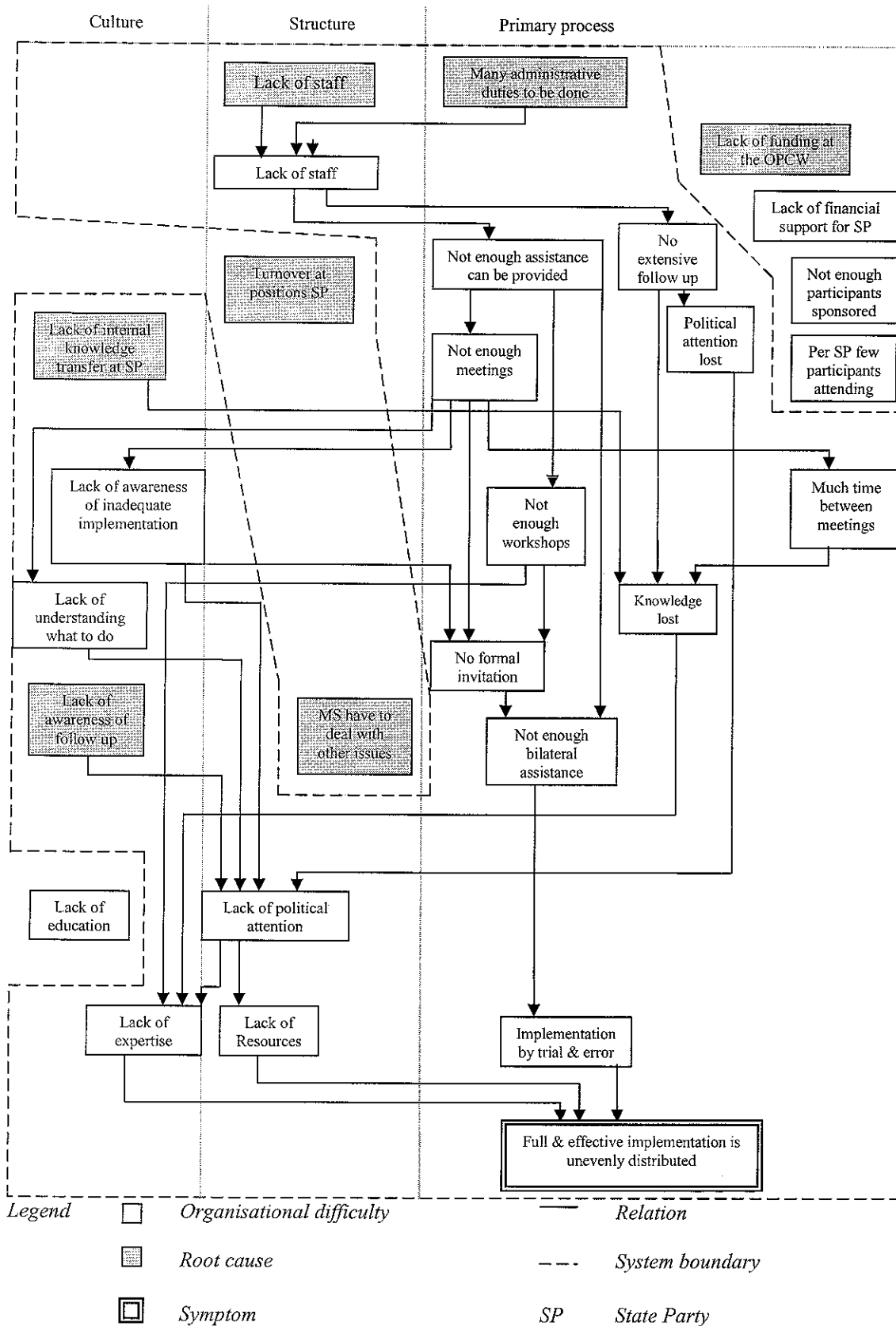


Figure H1 2 Causal diagram with new system boundary

The final causal diagram after the setting of system boundaries can be found in Figure 5.1 in Chapter 5 of the report.

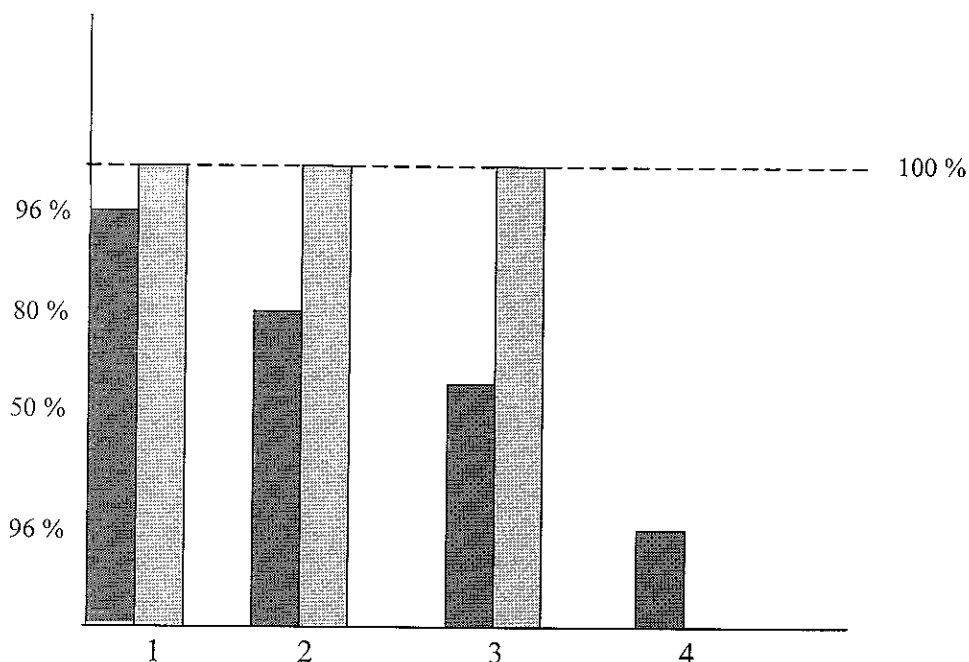
## Appendix I Development view - Input

Table I1 1 Information parameters form the monitor

No	Information	Source of Information	Frequency of Update
<b>General Information concerning the State Party</b>			
	Country name	ERD/GRB	One time event
	Regional Group	ERD/GRB	One time event
	General profile	CIA website	Quarterly
	Economic profile	Book Survey of the World, CIA website, VER/IVB	Quarterly
	Chemical related industry	Book Survey of the World, VER/IVB	Quarterly
<b>General Information of State Party in relation to the OPCW</b>			
1	Entry into force	ERD/GRB	One time event
2	Point of Entry (POE)	ERD/GRB	Once every 5 years
3	Standard Diplomatic Clearance Number (SDCN)	ERD/GRB	One time event
4	Privileges & Immunities Agreement	ERD/GRB	One time event
5	Elected positions this year	ERD/GRB	Once per year
6	Network of Legal Experts	ADM/HRB	Once per year
8	Number of staff	ADM/HRB	Twice per year
9	Details on the handling of Confidential information	OSP/OCS	Once every two years
10	Additional Documentation	All divisions	Ten times per year
11	Financial Assessment Status	ADM/BFB	Twice per year
12	State Party Events	ICA	Six times per year
13	Visits to/from OPCW	ICA, ERD/GRB, LAO	Twice per year
<b>Information about the State Party in relation to the status of implementation and implementation support</b>			
14	National Authority	ICA	One time event
15	Article VII Actions	ICA/IPB, LAO	Twelve times a year
16	Submissions - Art VII (5)	ICA/IPB, LAO	Once a year
17	National Legislation	LAO	Once per 6 years (One time event, in several stages)
18	Measures to control transfer	VER/IVB	Once per 6 years (One time event, in several stages)
19	Declarations	VER/DEB	Once a year
20	Penalties in place - Art VI	LAO	Once per 6 years (One time event, in several stages)
21	Protection - Art X (4)	ICA/APB, VER/DEB	Once per year
22	Assistance - Art X (7)	ICA/APB, VER/DEB	Once per year
23	Confirmation of Art XI (2e)	LAO	Once per 6 years (One time event, in several stages)
24	Implementation support	ICA/IPB	Four times per year
25	Inspections	INS/IMP	Once per two years
26	Facility Agreement	INS/IMP	Once per three years

## Appendix J Development view – Output

Different graphical presentations are part of the monitor. A few examples of these are shown in the figures in this Appendix.



*Legend*

- 1 National Authority
- 2 Start of drafting legislation
- 3 Completion of drafting legislation
- 4 Agreement of parliament on legislation

100% = State Party has feature in place, 0% = feature not in place  
 Percentage of States Parties who joined the same year and have this feature in place

Figure J1 1 Table of status of implementation of State Party in relation to others

The States Parties who joined the same year can be replaced by States Parties in the same regional group.

The parts of the implementation support process identified in the figures can be altered to include different or more parts. The parts do not have to be implemented in a fixed order.

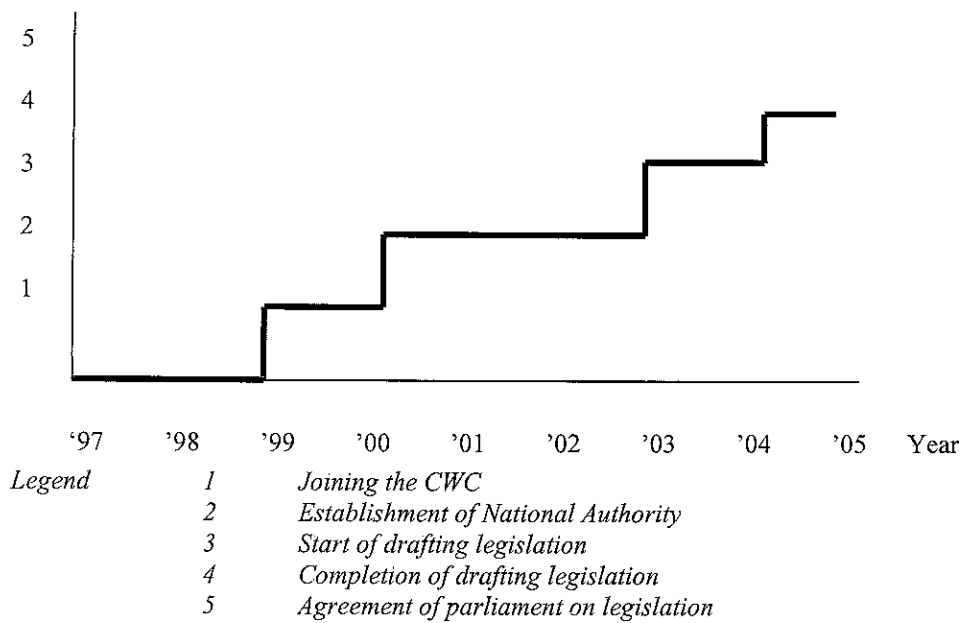


Figure J1 2 Status of implementation of States Parties over time

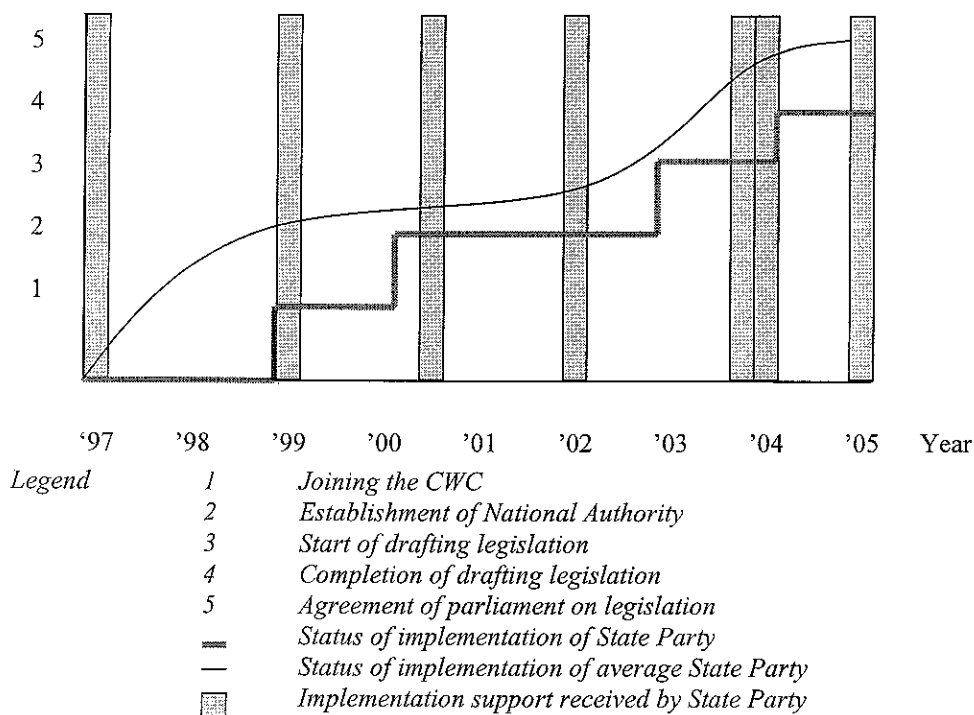


Figure J1 3 Comparison of implementation support offered and status of implementation

Figure J1.3 can also be shown for a regional group instead of a State Party. The bars in Figure J1 3 can get a different colour corresponding with the type of implementation support received.