

**E.E.C.- D.G. XII**

**BB/RR/95.201**

# **EUROWATER**

**VERTICAL REPORT ON FRANCE**

**January 1995**



**Bernard BARRAQUE  
Jean-Marc BERLAND  
Sophie CAMBON**

**LATTS-ENPC  
Génie de l'environnement**

*a 13013*

# TABLE OF CONTENTS

PREAMBLE.....	p. 3
I INTRODUCTION.....	p. 9
II GENERAL FRAMEWORK FOR WATER RESOURCES PLANNING AND MANAGEMENT. ....	p. 11
1- Legal regime.....	p. 11
2- Institutional framework. ....	p. 14
3- History of the existing system.....	p. 20
4- Water resources planning and social and economic development.....	p. 23
5- Institutions and mechanisms for the integration of sectoral water requirements in water planning and management.....	p. 25
6- Gross economic data, economic principles and mechanisms. ....	p. 27
7- Coordination and development of research and training. ....	p. 31
III AVAILABILITY AND USES OF WATER.....	p. 35
A) AVAILABILITY. ....	p. 35
8- Hydrological characterization.....	p. 35
9- Characterization of water quality.....	p. 36
B) WATER USES. ....	p. 45
10- Ecosystem management. ....	p. 46
11- Public use (water supply). ....	p. 48
12- Public wastewater disposal.....	p. 49
13- Industry (including thermoelectric power cooling plants). ....	p. 52
14- Agriculture. ....	p. 52
15- Hydropower. ....	p. 55
16- Inland navigation. ....	p. 57
17- Commercial fishing and fish farming. ....	p. 59
18- Leisure and recreation.....	p. 60
19- Dredging and mining.....	p. 63
20- Flood control and land drainage. ....	p. 63
C) BALANCE OF AVAILABILITY AND NEEDS .....	P. 69
21- Ratio of demand and availability.....	p. 69

22- Sectoral ratios of water use in agriculture, energy and industry. -----p. 70  
23- Regional and sectoral stresses on water. -----p. 71

**IV PUBLIC AND PRIVATE ACTORS AND THEIR ROLES AT DIFFERENT LEVELS OF WATER PLANNING AND MANAGEMENT -----p. 73**

**A) ACTORS AT NATIONAL, REGIONAL AND LOCAL LEVELS-----p. 73**

24- Governmental and non-governmental institutions contributing to water management-----p. 73  
25- Global and sectoral mechanisms or institutions for water planning -----p. 78  
26- Judiciary system and other forms of conflict resolution -----p. 81  
27- Mechanisms for public awareness and participation -----p. 83

**B) INTERFACE WITH EUROPEAN COMMUNITY AND OTHER INTERNATIONAL BODIES -----p. 87**

28- Governmental agencies participating in the definition of Community policies---p. 87  
29- Agencies, procedures and difficulties in the implementation and enforcement of EEC directives -----p. 87  
30- Transboundary water problems, agreements and bodies -----p. 89  
31- Other international accords relevant to water management -----p. 90

**C) SPECIFIC ROLES OF NGO'S AND OTHER INTEREST GROUPS -----p. 91**

32- Environment and consumer NGO's-----p. 91  
33- Trade associations-----p. 92  
34- Professional and scientific associations-----p. 92

**V MAIN FUNCTIONS IN WATER PLANNING AND MANAGEMENT -----p. 95**

**A) POLICY MAKING AND WATER RESOURCES PLANNING-----p. 95**

35- Policy making.-----p. 95  
36- Water resources planning : SAGE and SDAGE.-----p. 95

**B) WATER RESOURCES MANAGEMENT.-----p. 96**

37- Ecosystem management.-----p. 96  
38- Hydropower.-----p. 99  
39- Navigation.-----p. 99  
40- Leisure and recreation-----p. 101  
41- Other instream uses (mining, flood control)-----p. 101

**C) WATER ABSTRACTION AND SUPPLY FOR VARIOUS USES.----- p. 105**

42- Initiative and decision making. -----p. 105

43- Financing and building. -----	p. 107
44- Operating and maintaining.-----	p. 112
45- Regulation and control. -----	p. 116
46- Research, development and innovative solutions. -----	p. 119
D) WASTEWATER DISPOSAL FROM VARIOUS USES.-----	p. 123
47- Initiative and decision making. -----	p. 123
48- Financing and building. -----	p. 124
49- Operating and maintaining.-----	p. 127
50- Regulation and control. -----	p. 129
51- Research, development and innovative solutions. -----	p. 131
VI FUTURE TRENDS IN WATER PLANNING AND MANAGEMENT-----	p. 133
52- Major trends in water use-----	p. 133
53- Pending policies and legislation -----	p. 135
54- Regional versus central -----	p. 137
55- Public versus private -----	p. 138
56- Other major trends in institutional arrangements-----	p. 140
57- Current trends in research and development -----	p. 141
VII GLOBAL APPRAISAL OF THE INSTITUTIONAL SYSTEM FOR WATER PLANNING AND MANAGEMENT -----	p. 143
58- Most relevant merits of the existing system -----	p. 143
59- Major shortcomings and conflicts of the existing system-----	p. 144
60- Overall appraisal -----	p. 147
BIBLIOGRAPHY -----	p. 151
APPENDIXES -----	p. 159