

SYSTEMS RESEARCH INSTITUTE
POLISH ACADEMY OF SCIENCES

INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS

CONTRACTED STUDY AGREEMENT REG /POL/1

**"CONCEPTS AND TOOLS FOR STRATEGIC REGIONAL
SOCIO-ECONOMIC CHANGE POLICY"**

STUDY REPORT

PART 3

APPENDIX: SOFTWARE AVAILABLE

**COORDINATOR, IIASA: A. KOCHETKOV
COORDINATOR, SRI PAS: A. STRASZAK**

ZTS/ZPZC/ZTSW 1-36/85

WARSAW 1986

SYSTEMS RESEARCH INSTITUTE
POLISH ACADEMY OF SCIENCES
AND
INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS

CONTRACTED STUDY AGREEMENT REG/POL/1
"CONCEPTS AND TOOLS FOR STRATEGIC REGIONAL
SOCIO-ECONOMIC CHANGE POLICY"

STUDY REPORT
Consisting of 3 Parts

PART 3
APPENDIX: SOFTWARE AVAILABLE

COORDINATOR, IIASA : A. KOCHETKOV
COORDINATOR, SRI PAS : A. STRASZAK

ZTS/ZPZC/ZTSW 1-36/85

WARSAW 1986

PART 3: APPENDIX: SOFTWARE AVAILABLE

TABLE OF CONTENTS

	Page
I. AGGREGATION OF ORDERINGS-MEASUREMENT OF CONSENSUS DEGREE, by Lidia Księżopolska, Jan Owskiński and Sławomir Zadrozny	1
I.1. Introduction	1
I.2. Problem formulation	1
I.3. Method no 1: the "EXPERT" program	2
I.4. Method no 2: LP formulation	6
I.5. Method no 3: effective heuristics	7
I.6. References	9
Appendices	10
II. PROGRAMS FOR THE ANALYSIS OF STRUCTURAL MODELS, by Tomasz Romanowicz	26
III. AN INTERACTIVE MICROCOMPUTER SYSTEM FOR THE ANALYSIS OF ECONOMIC MODELS, by Andrzej Ziółkowski, Wojciech Cichocki and Cezary Iwański	38
III.1. Introduction	38
III.2. ANAGRAF's functions	39
III.3. Interactive model development and analysis	40
III.4. System commands	41
III.5. Remarks on implementation	43
III.6. Application to tax analysis	44
III.7. Concluding remarks	45
IV. COMMENTS ON CALCULATION OF INVESTMENT DELAYS, by Krzysztof Cichocki and Waldemar Wojciechowski	51
V. COMPUTER MODEL FOR REGIONAL AIR POLLUTION FORECASTING, by Piotr Holnicki and Andrzej Kałuszko	54
V.1. The mathematical forecasting model.....	54
V.2. The real data experiments	58
V.3. Possible applications to regional environmental policy	59

IBS. ZTS

38848/III

POURCHING

STUDY REPORT

PART 1: BACKGROUND METHODOLOGIES

AUTHORS: A. STRASZAK
J.W. OWSIŃSKI
A. JAKUBOWSKI
J. KACPRZYK
K. CICHOCKI
M. LEWANDOWSKA
W. WOJCIECHOWSKI
J. STEFAŃSKI
A. ZIÓŁKOWSKI

PART 2: POLISH CASE STUDY REPORT

AUTHORS: J.W. OWSIŃSKI
W. CIECHANOWICZ
J. BABAROWSKI
A. STRASZAK
A. JAKUBOWSKI

PART 3: APPENDIX: SOFTWARE AVAILABLE

AUTHORS: L. KSIĘŻOPOLSKA
S. ZADROŻNY
J.W. OWSIŃSKI
T. ROMANOWICZ
A. ZIÓŁKOWSKI
W. CICHOCKI
C. IWAŃSKI
A. KAŁUSZKO
P. HOLNICKI