

CONTENTS

| Chapter No. | Title | Page No. |
|-------------|--|---------------|
| | Declaration | ii |
| | Certificate | iii |
| | Acknowledgement | iv |
| | Contents | v |
| | List of Tables | viii |
| | List of Graphs | x |
| I | INTRODUCTION AND RESEARCH METHODOLOGY | 1 – 5 |
| | 1.1 Introduction | 1 |
| | 1.2 Statement of Research | 2 |
| | 1.3 Objectives of the Study | 2 |
| | 1.4 Hypothesis of the Study | 3 |
| | 1.5 Research Methodology | 3 |
| | 1.6 Chapter Scheme | 4 |
| | 1.7 Signification of the Study | 4 |
| | 1.8 Limitations of the Study | 5 |
| | 1.9 Concluding Remarks | 5 |
| II | REVIEW OF RESEARCH LITERATURE | 7 – 24 |
| | 2.1 Introduction | 7 |
| | 2.2 Review of Research Studies | 7 |
| | 2.3 Concluding Remarks | 20 |
| | 2.4 References | 20 |

| Chapter No. | Title | Page No. |
|--------------------|---|-----------------|
| III | A PROFILE OF STUDY AREA | 25 – 40 |
| | 3.1 Profile of Kolhapur District | 25 |
| | 3.1.1 Introduction | 25 |
| | 3.1.2 Historical Background | 27 |
| | 3.1.3 Topography | 28 |
| | 3.1.4 Population of Kolhapur District | 29 |
| | 3.1.5 Climate and Rainfall of Kolhapur District | 30 |
| | 3.1.6 Forest of Kolhapur District | 31 |
| | 3.1.7 Agriculture Production & Markets | 32 |
| | 3.1.8 Industries Progress of Kolhapur District | 33 |
| | 3.2 Profile of Chandgad Tehsil | 34 |
| | 3.2.1 Introduction | 34 |
| | 3.2.2 History | 34 |
| | 3.2.3 Topography | 35 |
| | 3.2.4 Population of Chandgad Tehsil | 35 |
| | 3.2.5 Communication & Transport | 35 |
| | 3.2.6 Agriculture | 36 |
| | 3.2.7 Horticulture | 36 |
| | 3.2.8 Education | 37 |
| | 3.2.9 Socio-Economics | 37 |
| 3.2.10 References | 39 | |
| IV | A PROFILE OF PHATAKWADI DAM | 41 – 54 |
| | 4.1 Introduction | 41 |

| Chapter No. | Title | Page No. |
|---|--|---|
| IV | 4.2 General Description | 43 |
| | 4.3 Necessity of the Project | 43 |
| | 4.4 History of the Project | 44 |
| | 4.5 Present Proposal in Brief | 44 |
| | 4.6 Ghataprabha Medium Project | 45 |
| | 4.7 Selection of Dam Site | 47 |
| | 4.8 Location of Dam Proposed Dam Site | 47 |
| | 4.9 Communications | 48 |
| | 4.10 Submergence | 48 |
| | 4.11 Financial Aspects | 49 |
| | 4.12 Catchment Area | 49 |
| | 4.13 Command Area | 50 |
| | 4.14 Existing Crop Pattern | 51 |
| | 4.15 Structural Designing of Phatak wadi Dam | 51 |
| | 4.16 Method of Irrigation | 52 |
| | 4.17 Indirect Benefits of the Project | 53 |
| | 4.18 References | 53 |
| | V | ENVIRONMENTAL IMPACT ASSESSMENT OF PHATAKWADI DAM IN KOLHAPUR DISTRICT |
| 5.1 Introduction | | 55 |
| 5.2 Environmental Impact Assessment | | 56 |
| 5.3 Personal Information of Respondents | | 58 |
| 5.4 Positive Impact of Phatak wadi Dam | | 62 |
| 5.5 Negative Impact of Dam | | 73 |

| Chapter No. | Title | Page No. |
|--------------------|------------------------------------|-----------------|
| V | 5.6 Conclusion Remark | 88 |
| | 5.7 Reference | 89 |
| VI | CONCLUSIONS AND SUGGESTIONS | 91 – 97 |
| | 6.1 Introduction | 91 |
| | 6.2 Major Conclusions | 91 |
| | 6.3 Important Suggestions | 95 |
| | 6.4 Testing of Hypothesis | 96 |
| | 6.5 Concluding Remarks | 97 |
| | BIBLIOGRAPHY | 99 - 104 |

LIST OF TABLES

| Table No. | Title | Page No. |
|------------------|---|-----------------|
| 3.1 | Town and Village of Tehsil in Kolhapur District | 26 |
| 3.2 | Population of Kolhapur District | 29 |
| 3.3 | Distribution of Forest area in Kolhapur District | 31 |
| 3.4 | Name of Crops and Percentage of Cultivable Land in District | 32 |
| 4.1 | Information of dams | 41 |
| 4.2 | Ghataprabha Medium Project, Salient Features | 45 |
| 4.3 | Command Area | 50 |
| 4.4 | Existing Crop Pattern of Benefited Area | 51 |
| 5.1 | Religion of Respondents | 58 |
| 5.2 | Social Group | 59 |
| 5.3 | Age of Respondents | 60 |

| Table No. | Title | Page No. |
|------------------|------------------------------|-----------------|
| 5.4 | Education Level | 60 |
| 5.5 | Family | 61 |
| 5.6 | Farming Land | 62 |
| 5.7 | Cropping Pattern | 63 |
| 5.8 | Dam Water | 65 |
| 5.9 | Other Sources of Irrigation: | 65 |
| 5.10 | Water Supply Equipments | 66 |
| 5.11 | Area Under Irrigation | 66 |
| 5.12 | Crop Production | 67 |
| 5.13 | Water supply of dam | 68 |
| 5.14 | Electric supply | 68 |
| 5.15 | Economic Status | 69 |
| 5.16 | Economic Development | 70 |
| 5.17 | Expansion of farm land area | 70 |
| 5.18 | Agro-based Industry | 71 |
| 5.19 | Employment Opportunities | 72 |
| 5.20 | Progress in Living Standards | 72 |
| 5.21 | Change in Income | 73 |
| 5.22 | Excessive use of Dam Water | 74 |
| 5.23 | Water Logging Problem | 76 |
| 5.24 | Fertility of Land | 77 |
| 5.25 | Water Pollution | 79 |
| 5.26 | Crops Diseases | 79 |
| 5.27 | Deforestation in Dam Area | 80 |

| Table No. | Title | Page No. |
|------------------|--------------------------------|-----------------|
| 5.28 | Crops Loss due to Wild Animals | 81 |
| 5.29 | Damage to Human Lives | 84 |
| 5.30 | Underground Water Level. | 85 |
| 5.31 | Water Borne Disease | 85 |
| 5.32 | Flood Problems. | 86 |
| 5.33 | Displacement of Villages | 86 |
| 5.34 | Impact on Natural Resources | 87 |
| 5.35 | Effect of Deforestation | 87 |

LIST OF GRAPHS

| Graph No. | Title | Page No. |
|------------------|---|-----------------|
| 3.1 | Crops and Percentage of Cultivable Land in District | 32 |
| 5.1 | Religion of Respondents | 58 |
| 5.2 | Social Groups | 59 |
| 5.3 | Education | 61 |
| 5.4 | Crops Production | 64 |
| 5.5 | Economic Status | 69 |
| 5.6 | Expansion of Farm | 71 |
| 5.7 | Excessive use of Water | 75 |
| 5.8 | Crops Disease | 80 |
| 5.9 | Crops Loss due to Wild Animals | 82 |
| 5.10 | Damage of Human Lives | 84 |