Appendix - I

The CADA provides for the constitution of a Project Advisory Committee, Canal Committees and Water User Associations. The Project Advisory Committee includes the following as members: one officer each from the Cooperative and Agricultural Departments, a representative from each Canal Committee in the scheme, relevant Members of Parliament and Members of Legislative Assembly and five other nominated members. The Chairman is the District Collector and the Executive Engineer-in-charge of the scheme is the convener. The primary function of the Committee is the seasonal planning, including making crop and water allocation plans. The Committee is supposed to meet at least one month before each season and once in a month during the season. The Canal Committee consists of the Presidents of the Beneficiary Farmers’ Association (BFA), and one officer each from the Cooperative and Agricultural Department, a representative of the Financing Bank and five nominated members. The Assistant Engineer-in-charge of the Project is the convener of the Committee and the Chairman is selected from among the presidents of the BFAs. The Committee is supposed to meet at least one month before each season and once in a month during the season. The function of the committee is to ensure equitable distribution of water, adoption of uniform agricultural practices in the command area, and coordination of the functions of the BFAs, the Water Users Associations are the basic organization under the CADA. Each BFA has an elected Managing Committee consisting of seven members: President, Vice President, Secretary, Joint Secretary, Treasurer and two additional members. The term of the Committee is for one year from April 1 – March 31. The BFAs are responsible for water distribution and maintenance below the outlet. In addition, the CADA channels subsidize inputs, including seeds and fertilizers for a variety of crops such as paddy, coconuts, pepper etc through the BFAs.
## Table No: 1 Total Cropped Area-Catchment Wise

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Head</th>
<th>Middle</th>
<th>Tail</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crop</td>
<td>Crop</td>
<td>Crop</td>
<td>Crop</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food Crop</td>
<td>Mixed Crop</td>
<td>Commercial Crop</td>
<td>Food Crop</td>
<td>Mixed Crop</td>
</tr>
<tr>
<td>Faddy</td>
<td>17.1</td>
<td>15.7</td>
<td>.</td>
<td>75.8</td>
<td>77.5</td>
</tr>
<tr>
<td>Tapioca</td>
<td>4.8</td>
<td>3.5</td>
<td>.</td>
<td>1.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>.</td>
<td>7.3</td>
<td>9.8</td>
<td>.</td>
<td>1.0</td>
</tr>
<tr>
<td>Rubber</td>
<td>.</td>
<td>48.3</td>
<td>55.7</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Coconut</td>
<td>.</td>
<td>18.7</td>
<td>8.8</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Vegetables</td>
<td>11.6</td>
<td>14.4</td>
<td>.</td>
<td>12.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Grand Total</td>
<td>33.5</td>
<td>91.7</td>
<td>74.3</td>
<td>90.1</td>
<td>29.6</td>
</tr>
</tbody>
</table>

*Source: Survey Data.*
Impact of Pampa irrigation Project - A case study with special Reference to Pathanamthitta and Alappuzha Districts in Kerala.

**INTERVIEW SCHEDULE**

1. Identification Number

2. Name :

3. Which district do you belong
   - 1. Pathanamthitta
   - 2. Alappuzha

4. Nature of Land
   - 1. Dry Land
   - 2. Wet Land

5. Nature of Crop
   - 1. Food Crops
   - 2. Seasonal Crops
   - 3. Commercial Crops

6. Type of Agriculturist
   - 1. Paddy
   - 2. Tapioca
   - 3. Sugarcane
   - 4. Rubber
   - 5. Coconut
   - 6. Vegetables
   - 7. Fish farming
   - 8. Mixed farming

7. Age
   - 1. Below 30 years
   - 2. 30-40 years
   - 3. 41-50 years
   - 4. Above 50 years

8. Sex
   - 1. Male
   - 2. Female

9. Educational Qualification
   - 1. Illiterate
   - 2. Primary
   - 3. Secondary
   - 4. College
   - 5. Professional

10. Number of members in your family
    - 1. Total
    - 2. Agri
    - 3. Non-Agri

11. How many acres of wet land used for cultivation
    - 1. Up to 2 acre
    - 2. 3-4 acre
    - 3. 5-6 acre
    - 4. above 6 acres

12. How many acres of garden land used for cultivation
    - 1. Up to 1 acre
    - 2. 1.2 acre
    - 3. 2.4 acre
    - 4. Above 4 acres

13. Nature of ownership
    - 1. Owned
    - 2. Lease
    - 3. Share Cropping
14. Details of Agriculture

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Crop</th>
<th>Area before PIP (in acres)</th>
<th>Area after PIP (in acres)</th>
<th>Average Yield (Unit)</th>
<th>Average Expenditure (Cost in Rupees)</th>
<th>Average Income (In Rupees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Paddy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tapioca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sugarcane</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Coconut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Vegetable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Fish Farming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

The Extent of using fertilizers and pesticides

<table>
<thead>
<tr>
<th>Item</th>
<th>Fertilizers</th>
<th>Pesticides</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chemical</td>
<td>Organic</td>
</tr>
<tr>
<td></td>
<td>Chemical</td>
<td>Organic</td>
</tr>
<tr>
<td>Coconut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tapioca</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugarcane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paddy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. State your degree of problems in connection with usage of water from PIP for agriculture purpose.
   a. Pollution ☐
   b. water scarcity ☐
   c. Blocking due to maintenance ☐
   d. Power failure ☐
   e. Lack of supervision ☐
   f. Drainage, salinity ☐
   g. Water logging ☐
   h. Flood ☐

17. Have you reduced the frequency of cultivation.
   1. Yes ☐  2. No ☐
17. a. If yes state the degree of problems about the low frequency of cultivation

1. Extremely low ☐
2. Very low ☐
3. Low ☐
4. No opinion ☐
5. High ☐
6. Very high ☐
7. Extremely high ☐
   a) Lack of profitability ☐
   b) Labour problems ☐
   c) High wage rate ☐
   d) Non-availability of skilled labour ☐
   e) Infertility of land ☐
   f) Water logging ☐
   g) Marketing of Products ☐
   h) Flood and other natural calamities. ☐
   i) Other source of Income ☐
   j) Any other ☐

18. Have you converted from wet land Cultivation to garden land cultivation
   1. Yes ☐
   2. No ☐

18. a. If yes state the reason
   1. Extremely opposed ☐
   2. Highly opposed ☐
   3. Opposed ☐
   4. No opinion ☐
   5. Admitted ☐
   6. Highly admitted ☐
   7. Extremely admitted ☐
   a) Additional Income ☐
   b) Real estate purpose ☐
   c) Highly profitable cultivation ☐
   d) Less time consuming ☐
   e) One time cropping ☐

19. Have you used a part of land for non-Agricultural purpose.
   1. Yes ☐
   2. No ☐
19.a. If yes, for which purpose?

<table>
<thead>
<tr>
<th>District</th>
<th>Pathanamthitta</th>
<th>Alappuzha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Public Uses</td>
<td></td>
<td></td>
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<tr>
<td>Airport</td>
<td></td>
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</tr>
<tr>
<td>School and Colleges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Houses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Purposes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. Do you face any problems due to pampa irrigation project
1. Yes □  2. No □

20.a. If yes, state the reason
1. Strongly agree □  2. Agree □
3. Slightly agree □  4. Neutral □
5. Slightly disagree □  6. Disagree □
7. Strongly disagree □
   a) Environmental problems □
   b) Health problems □
   c) Water pollution □
   d) Floods during monsoons. □
   e) Lack of proper management □

21. State your agreement or disagreement with the following aspects about the drinking water problem.
1. Strongly disagree □  2. Disagree □
3. No opinion □  4. Agree □
5. Strongly agree □
   a) Before the commencement of the project the well water is not sufficient. □
   b) After the commencement of the project well water level is increasing. □
   c) Rain water level is disproportionate □
   d) Supply of water for Irrigation is inadequate. □
   e) There may be increase in number of Residential households. □
   f) Increasing use of water due to demographic change. □
   g) P.I.P has not a healthy connection with Water supply department. □
   h) Water becomes insufficient during off season. □
i) The water not supplied in a timely manner by the P.I.P department. □

j) The canal has enough irrigation capacity. □

k) The water supplied through canal has been polluted. □

l) Irrigation water is diverted and used for industrial purpose. □

m) Irrigated water is used for other purpose like animal feeding, cloth cleaning etc. □

22. Mention your opinion about the project management of the Pampa Irrigation project


5. Good □ 6. Very good □ 7. Extremely good □

1) Management of Left bank canal

2) Management of Right bank canal

3) Water supply management

4) Outlet operating times

5) Water discharged

6) Duration of water pumping

7) Seepage

8) Maintenance of canal erosion

9) Maintenance of the inspection roads

10) Maintenance of the water courses

11) Maintenance of field channels

12) Maintenance of farm gates

13) Removal of weeds in the channels

14) Proper link to the main drains

15) Prevention of unauthorised outlets

16) Rotational pumping

17) Charges for usage of water

18) Agriculture extension and farmers training

19) Water quality testing

20) Proper balancing of water supply

21) Providing basic infrastructure in the catchment area

22) Promotional campaign on participatory irrigation management

23) Coordination with water users associations

24) Reclamation saline and alkaline lands for prevention of pollution

25) Application of irrigation technology

26) Environmental stability
Appendices

27) Removal of the areas of water logged

28) Removal of the areas of rendered saline

29) Maintenance of Ground water levels

30) Co-operation of the department staff.

31) Supervision of department staff.

32) Maintenance of the project.
   a) Main canal
   b) Sub canal
   c) Evaluation of the supply system.

33) Do you experience any difficulty from Irrigation department?
   1. Yes ☐  2. No ☐

34) If yes mention the extent of the difficulty affected.
   1. Strongly disagree ☐  2. Slightly disagree ☐
   3. Disagree ☐  4. Neutral ☐
   5. Slightly agree ☐  6. Agree ☐
   7. Strongly agree. ☐
      a) Procedural delay in maintenance. ☐
      b) Inadequate supervision. ☐
      c) Insufficient water supply. ☐
      d) Indifferent behaviour of the staff ☐
      e) Non Co-operation of staff. ☐
      f) Lack of proper guidance or help. ☐
      g) Lack of proper support from the department ☐

35) Do you have any suggestion for successful implementation of the project
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.............................................................................................................
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