Social Impact of Jatigede Dam construction

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Republic of Indonesia
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introduction

- Jatigede Dam is the second largest dam in Indonesia with 6,7 mil m$^3$ of water
- It aims to provide water for irrigation, flood controlling, raw water supply, and electricity
- The construction of the dam took place between 2007-2015
introduction

- More than 10 thousand families were displaced because of the construction.

- Land procurement was carried out in three steps:
  1. 1982-1986 affecting 4065 families
  2. 1994-1997 affecting 1226 families
  3. 2006-2007 affecting 1918 families

- Since the beginning, the construction of the dam has been a controversy because of various reason

- This paper seeks to find out affected societies condition after the relocation and to come up with policy recommendations
Methodology

- **Sampling**
  Stratified quota sampling based on five affected regions, $N = 75$

- **Data collection**
  Face to face questionnaire survey
  Focused group discussion

- **Analysis**
  Statistic descriptive-explanatory

<table>
<thead>
<tr>
<th>Regency</th>
<th>County</th>
<th>Village</th>
<th>Num. of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumedang</td>
<td>Darmaja</td>
<td>Cipaku</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Karang Pakuan</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pakualam</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Jatigede</td>
<td>Jemah</td>
<td>16</td>
</tr>
<tr>
<td>Majalengka</td>
<td>Kertajati</td>
<td>Mekarjaya</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>75</strong></td>
</tr>
</tbody>
</table>
Result and discussion

- Lost of jobs and livelihood

![Pie chart showing the percentage of respondents who lost their jobs and livelihood. Yes: 88.0%, No: 12.0%. Source: Author.]

- Perception on socio-economic condition

![Pie chart showing the perception of socio-economic conditions. Worse: 94.7%, Just as Bad: 2.7%, Just as Good: 1.3%, No Answer: 1.3%. Source: Author.]
Result and discussion

- Monthly income

  - < RP. 700,000: 74.7%
  - RP. 700,001 - RP. 1,000,000: 17.3%
  - RP. 1,000,001 - RP. 1,500,000: 4.0%
  - RP. 3,000,001 - RP. 4,000,000: 1.3%
  - RP. 5,000,001 - RP. 7,500,000: 1.3%
  - No answer: 1.3%

- Change of occupation

  - Farmer: 68.0%
  - Unemployed: 13.3%
  - Merchant: 4.0%
  - Small-shop owner: 4.0%
  - Livestock farmer: 2.7%
  - Formal sector: 1.3%
  - Seasonal worker: 1.3%
  - Housewives: 0.0%
  - Others: 5.3%

Before

After

13.3%  44.0%
6.7%  5.3%
5.3%  5.3%
0.0%  2.7%
21.3%  4.0%
Result and discussion

- **Housing size**
  - Before:
    - <100 m²: 36.0%
    - 100 - 150 m²: 22.7%
    - 150 - 200 m²: 32.0%
    - 200 - 250 m²: 1.3%
    - 250 - 300 m²: 4.0%
    - 300 - 500 m²: 0.0%
    - No answer: 0.0%
  - After:
    - <100 m²: 66.7%
    - 100 - 150 m²: 18.7%
    - 150 - 200 m²: 0.0%
    - 200 - 250 m²: 1.3%
    - 250 - 300 m²: 4.0%
    - 300 - 500 m²: 2.7%

- **Ownership of farmland**
  - Before:
    - None: 28.0%
    - <100 m²: 18.7%
    - 100 - 250 m²: 18.7%
    - 250 - 500 m²: 28.0%
    - 500 - 1,000 m²: 1.3%
    - 1,000 - 2,000 m²: 1.3%
    - 2,000 - 5,000 m²: 0.0%
    - 5,000 - 10,000 m²: 4.0%
    - No answer: 0.0%
  - After:
    - None: 81.3%
    - <100 m²: 10.7%
    - 100 - 250 m²: 2.7%
    - 250 - 500 m²: 1.3%
    - 500 - 1,000 m²: 1.3%
    - 1,000 - 2,000 m²: 1.3%
    - 2,000 - 5,000 m²: 0.0%
    - 5,000 - 10,000 m²: 1.3%

*Source: Author*
Result and discussion

- **Land ownership status**
  - Full ownership (SHM): 49.3%
  - Right of land: 36.0%
  - Deed of sale and purchase: 5.3%
  - Right to build: 2.7%
  - Pethok D: 1.3%
  - None: 1.3%
  - No answer: 4.0%

- **Access to Electricity**
  - PLN (SOE): 62.7%
  - Not available: 25.3%
  - Community generator: 4.0%
  - Independent generator: 1.3%
  - No answer: 6.7%

- **Land usage**
  - Unused: 3.7%
  - Paddy plantation: 20.4%
  - Palawija plantation: 50.0%
Result and discussion

- To mitigate negative impact, the government had come up with resettlement plan, however nothing could be realized by the time of impounding.

- In 2015, it was decided that the government will pay additional compensation.

<table>
<thead>
<tr>
<th>No.</th>
<th>Category</th>
<th>Compensation</th>
<th>Num. of HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Households who withdrew their land in 1982-1986</td>
<td>IDR 122.5 million (USD 9,000)</td>
<td>4,514</td>
</tr>
<tr>
<td>2.</td>
<td>Households who withdrew their land in 1993</td>
<td>IDR 30 million (USD 2500)</td>
<td>6,410</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>10,924</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: MPWH, 2015
Result and discussion

- Jatigede residents were largely traditional society who depends a lot on rice farming, thus relocation to a new area will have a significant impact.

- From the FGD, participants admitted that they could not purchase adequate housing, let alone farmland.

- The condition was even more depressing for them as it was harder to find a job.

- More than 90% of them are having monthly income lower than the local minimum wage (USD 175).
Result and discussion

- After one year they still have to struggle in restoring to their previous well-being.

- Problems such as soil infertility, inaccessibility of power, and poor road connectivity add up to their conditions.

- The survey serves as a further proof of large dam impoverishment risks (Cernea, 1996; Scudder, 2003).
Conclusion and recommendation

- Prior to relocation, majority of respondents engaged in agricultural activity, but after the relocation only about 13.3% remain.

- Monthly income is dropping below regional minimum wage after relocation.

- On average 82.2% of respondents admitted that the cost of fulfilling the daily needs considered more expensive after relocation.

- Five recommendations can be suggested:
  1. Cash compensation is not the most sustainable method to address resettlement problem.
  2. The government needs to at least double up current assumption for compensation.
  3. Resettlement action plan (LARAP) is mandated by law and needed to be fulfilled.
  4. Central government, who has better track record in providing settlement and housing, should be more involved in implementing resettlement plan.
  5. Maintaining law enforcement is important to prevent further complications of resettlement process.
References


References


- Presidential Decree no. 55 / 1993 re Land Procurement for the implementation of construction in the interest of the Public. The President of The Republic of Indonesia.


THANK YOU VERY MUCH

COMMENTS AND SUGGESTIONS ARE WELCOMED!