What was wrong about the case in Toyo-cho?

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The objective is to provide students with an awareness of social science perspectives and the capability to put them to work in improving society's ability to make difficult and long-term decisions.

Nobody, no organizations and no government sectors in Japan have analyze and summarize why Toyo-cho case has reached to failure.

I will give students some information on Toyo-cho case and expect students to consider how HLW disposal should be positioned in society and consider what we can do and have to do.

【Acknowledgements】
Prof. Horii (UT), Mr. Tajima, Shikoku Electric Power Company, Tsuno-cho in Kochi Pref., Mr.Okazaki, Office of Kochi Pref., Kochi Shimbun
Population at 2009 June
Japan: $127,614 \times 10^3$
Kochi-Prec: 777,259
Toyo-cho: 3,204
$<15$: 8.5%, $>65$: 40.7%

Index of financial power (IFP) = tax income/public expenditure
= 0.14 (Ave. Prefectures = 0.5, Tokyo >1)

List of local communities which have considered the subscription

<table>
<thead>
<tr>
<th>Open by medias</th>
<th>Local community</th>
<th>Motivation</th>
<th>Period</th>
<th>IFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003.4</td>
<td>Izumi, FUKUI</td>
<td>Finan. recons./Local dev.</td>
<td>6d</td>
<td>0.22</td>
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<tr>
<td>2003.12</td>
<td>Saga, KOCHI</td>
<td>—</td>
<td>9m</td>
<td>0.2</td>
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<tr>
<td>2004.4</td>
<td>Goshoura, KUMAMOTO</td>
<td>Demand by local Assem.</td>
<td>1d</td>
<td>0.11</td>
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<tr>
<td>2005.1</td>
<td>Kasasa, KAGOSHIMA</td>
<td>Finan. recons./Local dev.</td>
<td>2d</td>
<td>0.12</td>
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<td>2005.7</td>
<td>Shinkamigoto, NAGASAKI</td>
<td>—</td>
<td>—</td>
<td>0.22</td>
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<tr>
<td>2005.10</td>
<td>Yogo, SHIGA</td>
<td>—</td>
<td>4m</td>
<td>0.18</td>
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<tr>
<td>2006.8</td>
<td>Uken, KAGOSHIMA</td>
<td>Finan. recons./Local dev.</td>
<td>4d</td>
<td>0.11</td>
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<tr>
<td>2006.8</td>
<td>Yogo, SHIGA</td>
<td>Finan. recons./Local dev.</td>
<td>3m</td>
<td>0.19</td>
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<tr>
<td>2006.9</td>
<td>Tshuno, KOCHI</td>
<td>Finan. recons./Local dev.</td>
<td>2m</td>
<td>0.15</td>
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<tr>
<td>2006.9</td>
<td>Toyo, KOCHI</td>
<td>Finan. recons./Local dev.</td>
<td>9m</td>
<td>0.14</td>
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<tr>
<td>2006.12</td>
<td>Tsushima, NAGASAKI</td>
<td>—</td>
<td>—</td>
<td>0.21</td>
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<tr>
<td>2007.2</td>
<td>Futamana, FUKUSHIMA</td>
<td>—</td>
<td>1m</td>
<td>0.42</td>
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<tr>
<td>2007.3</td>
<td>Mimamiosumi, KAGOSHIMA</td>
<td>Finan. recons./Local dev.</td>
<td>—</td>
<td>0.16</td>
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<tr>
<td>2007.7</td>
<td>Koani, AKITA</td>
<td>Finan. recons./Local con.</td>
<td>5d</td>
<td>0.14</td>
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<tr>
<td>2009.3</td>
<td>Naraha, FUKUSHIMA</td>
<td>—</td>
<td>—</td>
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<tr>
<td>Phase</td>
<td>Time</td>
<td>Events</td>
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<tr>
<td>I</td>
<td>Mar.17</td>
<td>NPO Explained to Mr. Tajima, Mayor at the time.</td>
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<td></td>
<td>Mar.20</td>
<td>Mayor submitted application forms to NUMO.</td>
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<td></td>
<td>Mar.28</td>
<td>NUMO returned forms, saying “it is not late to wait until the time is right”.</td>
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<td>II</td>
<td>Jul.18</td>
<td>Mayor proposed studying meeting for assembly member.</td>
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<td></td>
<td>Aug. 8</td>
<td>Studying meeting (9 of 10 members attended.)</td>
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<td></td>
<td>Sep.5</td>
<td>Mr. Hashimoto, Governor, pointed out problems by his blog.</td>
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<td></td>
<td>Sep.10</td>
<td>Coverage by Kochi Shimbun</td>
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<td></td>
<td>Sep.19</td>
<td>Surfers living in Toyo made an appeal against subscription.</td>
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<td></td>
<td>Sep.24</td>
<td>Assembly held explanation meeting for residents (NUMO)</td>
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<td></td>
<td>Sep.28</td>
<td>Toyo-cho held meeting for representatives of town.</td>
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<td></td>
<td>Oct. 1</td>
<td>Toyo-cho held meeting for residents (a.100 person)</td>
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<td></td>
<td>Oct.10</td>
<td>Surfers living in Tokushima, neighbor pref. organized anti-group.</td>
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<td></td>
<td>Nov.19</td>
<td>Anti-group held studying meeting.</td>
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<td>Nov.21</td>
<td>3 Mayors in neighbor pref. made complaint.</td>
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<td>Dec.19</td>
<td>Anti-group started signature-collecting campaign.</td>
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<td>Dec.22</td>
<td>Assembly held all-members meeting at attending METI, NUMO.</td>
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<td>III</td>
<td>Jan.15</td>
<td>2 signature-lists against subscription was submitted.</td>
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<td></td>
<td></td>
<td>(1) Residents 2129 (a.62%), People out of town 2805</td>
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<td></td>
<td></td>
<td>(2) Residents 2201 (a.64%), People out of town 35214</td>
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<td></td>
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<td>From Mr. Sawaya’s (present Mayor) question, submission of application forms on Mar. 20 was revealed.</td>
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<td></td>
<td>Jan.22</td>
<td>Mayor made excuse for submission.</td>
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<td></td>
<td>Jan.24</td>
<td>Mayor declared subscription to NUMO on Jan. 25.</td>
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<td></td>
<td>Jan.25</td>
<td>Mayor submitted application forms to NUMO.</td>
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<td>IV</td>
<td>Feb.7</td>
<td>Interested person requested enactment of regulation.</td>
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<td></td>
<td>Feb.9</td>
<td>Assembly received the requirement against submission.</td>
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<td>Feb.13</td>
<td>Assembly adopted bill on recommendation of resignation of Mayor.</td>
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<td></td>
<td>Feb.19</td>
<td>A rally by residents against submission.</td>
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<td></td>
<td>Feb.22</td>
<td>Support-group was organized.</td>
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<td></td>
<td>Feb.27</td>
<td>Governors of Kochi and Tokushima visited at METI and NUMO.</td>
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<td>Anti-group organized open-forum.</td>
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<td>Phase</td>
<td>年月日</td>
<td>イベント</td>
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<td>IV 2007</td>
<td>Mar.1</td>
<td>Toyo-cho decided availability of requirement on Feb.9.</td>
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<td></td>
<td>Mar.2</td>
<td>Interested person formally required enactment of regulation.</td>
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<td></td>
<td>Mar.13</td>
<td>Assembly adopted bill on recommendation of resignation of Mayor.</td>
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<td></td>
<td>Mar.15</td>
<td>Anti-people organized group of recall of Mayor.</td>
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<td>Mar.22</td>
<td>Assembly adopted bill against acceptance of radioactive wastes (YES 5 vs NO 4)</td>
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<td></td>
<td>Mar.24</td>
<td>Support-group held symposium organized by METI &amp; NUMO.</td>
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<td>Mar.24</td>
<td>Professor of Kochi Univ. appealed dangerousness for earthquake in newspaper.</td>
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<td>Mar.27</td>
<td>Mayor requested reconsideration and the bill was rejected.</td>
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<td>Apr.5</td>
<td>Mr.Tajima, Mayor of Toyo-cho, resigned.</td>
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<td>Apr.6</td>
<td>Mr.Hashimoto, Governor, met Mr.Tajima.</td>
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<td>Apr.12</td>
<td>Symposium organized by METI was held.</td>
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<td>Apr.17</td>
<td>Announcement of Mayor election. Mr.Tajima and Mr.Sawayama.</td>
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<td>Apr.22</td>
<td>Mr.Sawayama won. Sawayama: 1821 votes vs Tajima 761 votes.</td>
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<td></td>
<td>Apr.23</td>
<td>New Mayor, Sawayama, withdrew application forms.</td>
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</tbody>
</table>

Background of Toyo-cho (1/2)

【Locality of Toyo-cho】

◆ Industry: Beautiful sea and Ponkan mandarin

Only few infrastructural development has been carried out. Toyo-cho is the area where development has always been deferred.

◆ Big earthquake every 100 years. 40% within 30 years.

Needs for precautions against an earthquake, but no money


Death toll: 679 per.(Kochi-pref)

Many people who had experienced have lived in Toyo-cho.

◆ Far and far from Kochi-city (prefectural capital) and Tokushima-city

No candidate for Governor election visits during election campaign. Almost all people in Kochi and Tokushima has no interest.

◆ Antagonism between None-area and Kon-noura-area

◆ Problem on discriminated community (DOWA problem in Japanese)
Background of Toyo-cho (2/2)

【Nature of Japanese people; Especially in local village】
◆ Culture of social ostracism (Mura Hachibu in Japanese)
◆ Culture based on “Harmony is to be valued”
  If person A takes part in the field trip to Rokkasho organized by NUMO, the other persons talked about A “A becomes to curry favor with NUMO” behind A. This steeply spread not only to around A’s home, but also A’s business office and A’s child’s school, leading to the difficulty to live in the village.
◆ Avoidance of “ray”, “radioactivity” and “radiation”, especially by female

【Locality of Kochi】
◆ Residents in Kochi Pref.: We can survive even under difficult economic situations or severe winter.
◆ Kubokawa-cho: Plan of NPP construction, Discord during 30y
◆ Sympathizers of Communist Party: schools, hospitals, • • •

Information on actors (1/8)

【NUMO】
◆ NUMO: Nuclear Waste Management Organization of Japan
  In Japanese: 原子力発電環境整備機構

Nuclear Power Environment Maintenance/Servicing Organization
Term “Waste” is not used in Organization Name in Japanese. Why?
◆ Symposium in Tsuno-cho, organized by METI and NUMO
  Name of waste: “Vitrified Waste”, not high-level radioactive waste
◆ NUMO is composed of temporarily assigned workers from Electric Power Companies of Japan.
  - Workers come back to original EPC after 3 years.
  - Workers always face to original EPC.
  - They can not promote the site selection, if the selection procedure disturb the original EPC’s business (ex. Use of MOX fuels)
  - Nobody in NUMO picks up the pieces afterwards even though they make efforts.
  - Efforts in NUMO do not reflect their promotion in original EPC.
Information on actors (2/8)

【NUMO (cont.)】
◆ Status: **constructive public officials**
  - Limit of business activity
  - Excuse for no achievement
◆ Only after the voluntary apply, NUMO starts to work.
  - Very poor business footwork by using the excuse based on
    “Legislation of Implementing Procedure”
    In law: before apply: METI; after apply: NUMO
    Problems on “Perception for responsibility” and “Interface of roles of METI and NUMO”
  - After withdraw of application forms, NUMO has not followed up Toyo-cho at all.
    Nobody has visited Mr. Tajima.
    After Mayor election, Chief of Fishermen’s Union continue to have interest in
    invitation of repository, but nobody has visited.
  - **Lose of credit and reliability of NUMO**
◆ Almost all Japanese people **do not know NUMO** at all.
◆ **No reactions** against the article on earthquake in newspaper and the
  occult science claimed by anti-nuclear groups

Information on actors (3/8)

【System】
◆ According to “Legislation of Implementing Procedure”, **Mayer of local government has to manage everything.**
  - Explanation to Local Assembly members
  - Explanation to residents
  - Explanation to Pref. Governor, members of Diet, Mayers around towns
  - Management against all anti-nuclear/environment protection groups
  - Moreover, the Mayer have to win at next election and let Governor,
    members of Diet, Mayers around town **convince of win at their elections.**
◆ According to “Legislation of Implementing Procedure”, NUMO and METI legally have no responsibility for those.
Information on actors (4/8)

[Mayer (Mr. Tajima)]
◆ Mr. Tajima proceeded the submission procedure before prior consensus building was thoroughgoing.
◆ Mr. Tajima did not carry out groundwork to Pref. Governor, Mr. Hashimoto, at all. Is this crude political ability?
◆ Mr. Tajima considered:
  - Toyo-cho’s subject
  - Infrastructure improvement for earthquake is highest priority political issue, but Toyo-cho did not have enough tax income.
  - Grant-in-aid from Japanese Gov. was very attractive.
  - Voluntary submission does not mean construction of final repository.
  - Residents can study in 2 years.
  - Toyo-cho can contribute to national energy security, leading to pride of town.
◆ Media reported that “The documents submitted by Mayer was rejected even by NUMO (root of evil in nuclear) because it is too early”
◆ One of points in election: Mr. Tajima’s humanity
  - At present, many residents expect Mr. Tajima to come back to Mayer’s position.

Information on actors (5/8)

[Anti-nuclear groups]
◆ Many surfers living in Toyo-cho and coming from national-wide
  - Typical phenomena in Japan
  - Compensation for fishery right: unique of Japan
  - Culture of Japan to eat fish?
◆ Excellent practice for fanning residents’ fear
◆ Prompt response
  - To organize studying meeting, prior to meeting by METI and NUMO
  - At symposium organized by METI and NUMO:
    Specialists coming to symposium previously opened.
    Anti-groups gave specialists many questions which were out of their special research fields.
    Anti-groups could give residents the impression that science and technology of disposal was not established satisfactorily.
  - Activities in school; distribute the materials to students.
◆ To win female to anti-groups’ side
◆ First submission without agreement of local assembly and residents, Commit of suspicious NPO, Threat from favor-sides, Second submission without agreement gave Right and Justice to anti-sides.
**Information on actors (6/8)**

【Prefecture Governor (Mr. Hashimoto)】
◆ Reporter for NHK (Japan Broadcasting Corporation) until 1991
◆ Father: a member of Diet
  Brother (Ryutaro Hashimoto): former Prime Minister of Japan
  No relationship with Kochi Prefecture
◆ Excellent player to the gallery
◆ **Highest priority: To stand for next Diet election** (Aug.30, 2009)
  cf. Mr. Hashimoto has declared his intention to run for election in Kochi.
  - Mr. Hashimoto had criticized multiple election and selected in 1991.
  - But he continued until 2007.
  - At meeting with President of NUMO, Mr. Hashimoto was interested only in how he was taken by TV camera and broadcasted in Japan and Kochi.
  - Mr. Hashimoto forced to meet Mr. Tajima who had already resigned.

【Governor of Tokushima Pref. (Mr. Iizumi)】
◆ **Just before election** (March 22, 2007)
  - Mr. Iizumi expected to win an easy victory.
  - Nobody except residents near Toyo-cho had interests
    (Tokushima Shimbun, President of Tokushima Consumer Organization)

**Information on actors (7/8)**

【Local Assembly】
◆ Weathercock
  At first, wait-and-see attitude
  After more than a half of residents were found to be against submission, many members were converted.
◆ If combined with Assembly of Tsuno-cho, possibility of progress

【Media/Press in Kochi】
◆ Tone of argument: neutral ~ little bit critical
◆ **Reports** of playing to the gallery of Governor, Mr. Hashimoto and of **activity of anti-groups**, especially activity of female.
Information on actors (8/8)

【Atomic Energy Society of Japan】
◆ No actions, No messages
◆ No reactions against occult science circulated in homes, schools, offices and society
◆ To worry about stigma (brand ?) as academic society that follows the government line

【Nuclear Energy Industries】
◆ Priority in nuclear industrial circle
  1: Plutonium Thermal Use in Japanese: Use of MOX in LWR
  ......
x: Intermediate Storage
  ......
y: Disposal of ILW (Sub-surface disposal in Japanese: 50m〜100m)
  ......
z: HLW disposal
◆ In the end, Rokkasho or near Rokkasho.

Other information (1/2)

【Residents on Favor & Neutral position】
◆ Many people understand safety of disposal business in the back of their mind, but can not have so good feeling.

◆ Many people understand that they have to do or have to accept something to develop the local community for young generation, but there is no reason to select HLW repository, is there ? Are there any alternative options ?

◆ Many people really understand why final disposal site is their town.
Other information (2/2)

Pattern of Anti-Groups’ PR
Meeting organized by anti-gr.  Symp. & Infor. & Pamphlet

- 1 HLW = 30 Atomic Bombs  ×  40,000 wastes
- Fear
- Probability of earthquake: 40% within 30 years
  Professors from NUMO can not answer safety.
  Professor of Kochi Univ. claims the dangerousness.
  Agree with doubt on safety
- Local communities are emaciated by Government, and Gov. strikes local communities on their cheeks by a sheaf of banknotes.
  Do not sell our town (souls of residents) to NUMO (Gov. or evil).
  Agree

We have to be united against HLW disposal business for our children and grandchildren!

Points extracted from Toyo-cho Experience —Two points as a start for consideration—

(1) **Failure of system of voluntary application open to all local communities** should be recognized.
   Main system should change to proposal from Government to local community and prefecture government.

(2) Engineers/Scientists have to know that **understanding the safety by ordinary common people is absolutely impossible**.
   Important points are systems/how to/responsibility to achieve the safety.