FOR 560: The Pakatakan Watershed Case Study

Environmental Management with Multiple Stakeholders
Decision Making, Taking Action and Leadership When No One is in Charge

Directions:

• Read the case study (attached).
• Select one stakeholder group (see list below) that you identify with.
• Develop a “Stakeholder Position Paper” to present in class.
• Your “stakeholder position paper” should include the following:
  1. A one-paragraph description of the problem that calls for action based on the “Problem Definition” framework we discussed in class (Chapter 2) and according to your stakeholder group’s perspective.
  2. Provide three examples of the context of the problem.
  3. An answer to the question: Why does your stakeholder group care about this problem?
  4. A detailed description of the decision to be made based on the “Decision Making” framework (in Miller et al. Chapter 4, p.94-95), including short-term objectives and long-term goals.
  5. A one-paragraph summary that describes exactly what your stakeholder group is trying to achieve with the decision, including a list of the criteria that will drive the decision making process (see p. 96-101) and based on your stakeholder group’s perspective.

You will hand in your paper at the end of class. It should be typed, double spaced and in 12-point font. Limit of 4 pages.

You can use the Rural Resource Management text and your personal experience, knowledge and opinions to write this position paper, but remember you must represent your chosen stakeholder group.

Your grade will be based on the following components:

Problem definition and description of the problem with context (20 points)
Why does your stakeholder group care about this problem? (20 points)
Detailed description of the decision to be made (20 points)
Stakeholder interests and criteria (20 points)
Writing, Organization, Follow Directions (20 points)
## Stakeholder Groups

<table>
<thead>
<tr>
<th>STAKEHOLDER GROUP</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>City of Springfield Water Authority</td>
<td>City officials responsible for the water supply – You need to demonstrate control of the watershed with comprehensive management plan to avoid the expensive Super-Clean treatment system.</td>
</tr>
<tr>
<td>City of Springfield Board of Commissioners</td>
<td>Elected officials from Springfield – You must represent the people of Springfield. They do not want to see taxes go up.</td>
</tr>
<tr>
<td>Protect Pakatakan</td>
<td>Environmental advocates from both Springfield and Pakatakan County – You want to protect the environmental quality of Pakatakan County.</td>
</tr>
<tr>
<td>Pakatakan Forestry Council</td>
<td>An alliance of loggers and forest industry representatives – You represent the economic interests of the forest products industry in Pakatakan County. You want to maintain a working landscape.</td>
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<tr>
<td>Pakatakan Agricultural Advocates</td>
<td>An alliance of farmers and agricultural industry representatives – You represent the economic interests of the farming in Pakatakan County. You want to maintain a working landscape.</td>
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<tr>
<td>Pakatakan County Chamber of Commerce</td>
<td>County business representatives— You represent the county’s business interests. You want to maintain opportunities for development.</td>
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<tr>
<td>Pakatakan Trout Unlimited and area fishermen</td>
<td>You represent the interests of fishermen in Pakatakan County. You want to maintain the quality of the fisheries.</td>
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<tr>
<td>Pakatakan Property Rights Alliance and private landowners</td>
<td>You represent the interests of private landowners in the watershed (Pakatakan County). You do not want the City to take away your private property rights.</td>
</tr>
<tr>
<td>Pakatakan Real Estate Association</td>
<td>Your organization is dedicated to promoting real estate development in Pakatakan County and enhancing property values.</td>
</tr>
<tr>
<td>Pakatakan Association of Towns and Villages</td>
<td>Your organization is made up of representatives from each Town and Village of Pakatakan County. You want to maintain your sovereignty and local control of zoning and land use.</td>
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**The Pakatakan Watershed Case Study**

The State of Hamiltonia recently passed the Anti-Z Act to control the Z-parasite in surface drinking water supplies throughout the state. The law generally requires all surface water drinking supplies in the state to use the “Super-Clean” water treatment system in order to kill the Z-parasite from drinking water. The exception to the rule is an amendment which allows a conditional waiver from this expensive treatment requirement if a surface drinking water supplier has not had any history of Z-parasite outbreaks, and demonstrates control over its water supply through a comprehensive watershed management plan.

The Z-parasite, although relatively rare, is responsible for an average of 10,000 outbreaks of gastrointestinal illness each year, with some cases being fatal. Not much is known about this parasite except the following: it is carried in mammals including humans, livestock and wildlife; the parasite’s cysts are transported via feces in a dormant cyst phase until it reaches a new host (the exact life span of the organism is not known, but cysts have become active after one year or more of dormancy); it has been discovered that the cyst is carried on suspended sediments in water (indicating that the higher the turbidity, the more likely the cysts are present); and the cysts are killed by the Super-Clean water treatment, even in the dormant stage.

The City of Springfield, the largest city in Hamiltonia with over half the state’s population, owns a large surface water reservoir in Hamiltonia’s Pakatakan County, about 75 miles from the city center. (Note: The City of Springfield is not located in Pakatakan County. The water follows an underground tunnel from the reservoir to the city. If a filtration plant is built, it will be constructed outside the watershed near the city. The actual construction will have no impact on water quality.) The Pakatakan Reservoir was built in 1970 by damming the Pakatakan River to supply the drinking water needs of the rapidly growing city of Springfield. The Pakatakan Reservoir is an excellent source of drinking water without a single outbreak of Z-parasite reported (though it is present naturally in this area). To make way for the construction of the reservoir in the 1960’s, the state government of Hamiltonia, on behalf of Springfield, issued the condemnation permits for houses and farms to facilitate the construction of the reservoir, and granted the city of Springfield regulatory control (with state oversight) of the region’s water resources. Many residents of Pakatakan County were displaced to make room for the reservoir and some of the county’s richest farmland was flooded when the reservoir was filled. Pakatakan County residents are still bitter over the loss of local sovereignty.

Pakatakan County (Springfield’s watershed) is a rural and mountainous region covering about 1 million acres. Land uses in the watershed are as follows: 75% forest; 19% agriculture; 4% residential; 2% water bodies. It is the home of about 15,000 permanent and 10,000 seasonal residents, as well as several threatened wildlife species, including the spruce grouse, moose and pine marten. The human population of Pakatakan has not changed dramatically in over 150 years except in 1970 when 2,000 people left the county during the
construction of the reservoir. However, most people who were moved, stayed “close to their roots” in the county. The people of Pakatakan are predominately the descendants of European immigrants who escaped political persecution 150 years ago and are reluctant to leave the area or take orders from Springfield regulators. Unlike the booming economy of Springfield, the Pakatakan economy is poor with most people employed in forestry, agriculture, tourism, and small-scale manufacturing. Prosperity and an expanded tax-base seem to be “right around the corner” with new vacation and suburban development proposed in the county (remember, it is only 75 miles away from the city of Springfield). Pakatakan County residents obtain their drinking water from groundwater sources (wells), which are not threatened by the Z-parasite, and do not get their drinking water from the Pakatakan Reservoir.

Recently, high sediment loads in the water system have triggered concern about Z-parasite outbreaks and brought the reservoir’s exemption from the “Anti-Z Act” under close scrutiny. Although the City of Springfield’s economy has done well, the cost of the Super-Clean water treatment system required by the law (from which the Pakatakan Reservoir is currently exempt), is estimated at $8 billion to construct and $250 million annually to operate, and would dramatically increase taxes and water costs in the city, possibly to a point that could jeopardize economic growth. The City of Springfield’s economy is important to the state in general. When the Anti-Z legislation was discussed in the state legislature, Springfield leaders understood the impact of these costs and argued for the amendment which allows a conditional waiver from the treatment requirement if a watershed has not had any history of Z-parasite outbreaks. The amendment requires the City to demonstrate control over the watershed via a comprehensive watershed management plan. The cost of implementing the comprehensive management plan is estimated at $2 billion over 10 years. Much of this money would go to upgrading sewage systems and implementing Best Management Practices on farms and forestry operations within the county. Also, the City of Springfield plans to identify strategic lands to purchase (thru fee title or conservation easements) in the future to further promote water quality. In addition, other Hamiltonia state leaders from the rest of the state believe that the state would have to help the City of Springfield pay for this treatment plant if it is required.

A panel of prestigious and highly knowledgeable government experts has been appointed to oversee the review of the “Super-Clean” treatment exemption, including weighing the concerns of all stakeholder groups. Your group has been asked to present a position paper on the issue.