GIS--A NEW TOURISM DEVELOPMENT TOOL

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Today, many areas throughout the world seek the economic benefits from tourism expansion. The most popular method used to entice more tourists is promotion. Although promotion has merit as a marketing tool, more emphasis should be placed on the supply side of tourism--the places and activities to be promoted. Most areas will need to increase the volume and quality of attractions if they seek new economic benefits from tourism development. Experience has shown that most travel attractions are based on natural and cultural resources.

The search for areas with the greatest natural and cultural resource potential can be of great assistance to state, provincial, and national leaders of tourism. Early attempts at analyzing regions for this potential (Blank, Gunn, 1966) were hampered by the difficulty of overlaying a number of maps to illustrate the sum of several influential factors. Now, with GIS computer technology, this has become more feasible.

Described here is an outline of process of resource evaluation that utilizes GIS technology to identify zones of greatest tourism potential for development. This process has been experimented with for several years and recently applied successfully to the states of Washington (Tourism, 1989), Oklahoma (Proposed, 1987), (Upcountry, 1990), and Delaware (Gunn, 1991).

THE PROCESS

This process of discovering zones of potential for tourism development is based on the hypothesis that those areas with the greatest abundance and highest quality of resource
characteristics have the greatest potential. This is in response to today's market trends demanding destinations rich in natural and cultural resources in spite of increased theme park popularity. Interest in outdoor recreation--environmentalism, nature photography, adventure travel, ecotourism, physical fitness--continues to grow. Recently, this has been accompanied by great growth in demand for cultural activities--visiting archeological and historic sites, understanding different cultures, and exploring our heritage. These characteristics of market demand suggest that regions seeking greater tourism growth should increase their store of attractions based on natural and cultural assets. Then, when more visitors are attracted to destinations, greater economic impact will be derived from the supporting service businesses, such as for lodging, food service, shopping, and transportation.

Essentially, the process described here consists of at least the following six steps.

1. **Assumption of Market Potential.** Travel destinations continue to thrive mostly on market segments interested in activities associated with natural and cultural resource factors.

2. **Study of Natural and Cultural Resources.** For a tourism development project, the region's natural and cultural resources should be studied. In most areas, sufficient documentation of these characteristics can be found in secondary data sources. It is necessary for the planner to fully understand the location and quality of these resources. Reports and maps need to be reviewed in order to prepare the needed generalized maps of the resources. This step should provide new insight and creative stimulation for new development.

3. **Description and Generalized Maps.** This step focuses on the relevance of the several sets of information derived in Step Two. Hand-drawn maps (to uniform scale) should indicate broad-scale zones rather than detailed specifics. For example, lakes and highways have
development influence outside their exact boundaries. Each map should reflect also a relative scale of importance, such as best, good, fair, and poor (or none).

4. **Conversion of Maps to Computer.** Figure 1 illustrates two series of maps. For the application illustrated here, the region called "Upcountry South Carolina" (six counties in the northwestern portion of the state) was used. The hand maps were converted by the ARC/INFO software (trademark, Environmental Systems Research Institute) and the computer work was performed by the Regional Resources Development Institute of Clemson University.

5. **Synthesis of Studies and Maps.** This step synthesizes the information accumulated in order to draw conclusions about the region. The several studies of factors are compared to determine how they support one another. As shown in Figure 1, the two computer map series are aggregated to produce two composite maps which reveal how the several factors combine in greatest strength.

6. **Interpretation and Concepts.** From the studies and composite maps, generalized zones can be delineated as illustrated in Figures 2, 3, and 4.

**CONCLUSIONS**

Experimentation and application of this technique reveals several conclusions of interest to the landscape architect and planner.

First, these zones must not be construed to be hard-edged and permanent. Instead, they represent areas of a general nature and are subject to future changes in market interest and supply development.
Second, these zones suggest opportunities for new cooperation between tourism leaders within each zone. For example, until Figure 4 was revealed, the tourism interests within these zones were not aware of their common potential if they worked more closely together.

Third, all zones contain one or more service centers. It is dominantly at these cities that the new service businesses will be in demand when the surrounding area attractions are developed. Cities contain the basic infrastructure and access and therefore are the logical places for tourist service development.

Fourth, all zones need to be studied in greater detail for identification of projects and their feasibilities. When professional design talent is added to input from local people, many ideas for new development, appropriate to the area, can be revealed.

Fifth, each zone must be examined carefully to determine its capacity for further development. Some resources may already have reached the point at which further tourism development could be detrimental to them. Visitor social capacity also should be considered.

Sixth, future research is necessary to refine several of the assumptions used in this process. Relationships between development and each resource need to be refined. How to give separate weight to each factor deserves more detailed study. And, how to delineate the spreading influence effect of each factor needs to be examined. These and other aspects need to be given fine tuning in future applications of this process.

Finally, even with its present assumptions and needs for improvement, this process is extremely helpful in taking much of the guesswork out of assessing tourism potential. Rather than assuming that tourism has equal opportunity everywhere, it documents support in only certain zones. Conversely, people located in areas outside the zones will have to overcome many
resource deficiencies if they hope to develop tourism. This process is most effective when applied jointly by local people assisted and guided by specialists such as landscape architects.

REFERENCES


Gunn, Clare A. 1990. Upcountry South Carolina Guidelines for Tourism Development. College Station, Texas.


FIGURE 1
Two Series of Computer Overlay Maps

FIGURE 2
Zones of Tourism Development Potential
Based on Natural Resources
(Upcountry South Carolina)

FIGURE 3
Zones of Tourism Development Potential
Based on Cultural Resources
(Upcountry South Carolina)

FIGURE 4
Zones of Tourism Development Potential
Based on Natural and Cultural Resources
(Upcountry South Carolina)