

Needs and Opportunities in Chaparral Brushlands¹

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Chaparral brushlands, a major part of North American Mediterranean Ecosystems, represent one of the globe's last unexplored productive landscapes. This symposium addresses the challenges of a new frontier of knowledge. For this reason I'm honored to be able to open this meeting.

During our exploitative era we've been able to ignore the chaparral resource. A look at our record shows we've freely enjoyed the wealth of our great productive land, taking oil, virgin forests, fisheries, and more and more resources. First, we harvested the accessible resources. Now we enter an era of scarcity and must respond to limits by doing more than just harvesting. We must begin to manage land more intelligently and intensely.

How do California's more than 30 million acres of Mediterranean-type Ecosystems fit this new era of limits? The need for fiber, food, energy, recreation, and esthetic landscapes is obvious. The Mediterranean region of California represents 30 percent to 50 percent of the state and holds well over half our people. These lands are not only underutilized but much of the science of their management is still developing. Yet these lands are the focus of continuing rapid population growth in California and elsewhere.

Just managing the fire environment with increased housing and population is a serious problem. It is costing our state millions in unpredictable and I believe unnecessary expenditures each year.

As a management strategy we should change a problem into an asset. Take energy for instance. The chaparral ecosystem is known for its rapid growth cycle. Initial studies show that 30 tons of biomass can be produced per acre, without irrigation, in 20 or 30 years. Instead of costly wildfires, management can utilize the chaparral energy for both people and jobs. As part of our 20-year plan California is moving aggressively to accomplish this.

Similar opportunities that are currently problems exist in other nations. Take Kenya as an example;

¹Presented at the Symposium on Dynamics and Management of Mediterranean-type Ecosystems, June 22-26, 1981, San Diego, California

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while it does not have a Mediterranean-type climate, there are important similarities. It is said to have the world's most rapidly growing population. Yet only 20% of its lands are tillable. Its arid brushlands are essential to its future.

I learned this recently when I called on Mr. Richard Leakey, Kenya's Minister of Resources.

Leakey had traveled the world seeking insight into Kenya's brush problem but found little help. In California, because we've been reacting to a crisis of energy consumption, he found emphasis of "go home and plant trees for oil". Biomass substitutes for oil are important here in the United States. Oil is not Kenya's problem but immediate cooking fuel is. He also attempted to find support for research in the potential of managing and understanding the endemic species of Kenya, many of which are fast-growing and have great promise. But again, no one, including California was helpful. I'm sure this problem could be repeated in many areas of our concern.

Symposiums like this reflect a state of the art of thinking and information. This symposium is the first of its kind that has been successful in drawing both top managers and scientists, in roughly equal numbers, together in a scientific setting. There is another level of important opportunities. We have to take an expanded view-- a visionary approach to those needs and the opportunities. What Leakey found in his search is true of this conference. There are several omissions to note. First, the human dimension of the problem environment is lacking. Also missing is the process of translating complex technical information to the public at large. This symposium also needs emphasis on an applied systems approach. The era of single-purpose research and decision-making is behind us. We can no longer consider chaparral without addressing social and political issues and other matters. Ultimately, it is absolutely vital to reach decisionmakers and land managers, to present the visions of an effective assault on the problems of the Mediterranean Ecosystem. The data and knowledge you hold are tools that must be put to work.

I see chaparral and the Mediterranean Ecosystems as a frontier. We all need to expand our view beyond a narrow focus. A true ecosystem approach is needed. In essence this means taking a systems view with all the breadth that implies.

A common data base is an essential major part of managing natural systems. But if we continue with the Mediterranean Ecosystems the way we have with other natural systems, we will not succeed. The basic reason is a lack of coordinated approaches. For instance, in trying to understand California soil data, I've found we lack a comprehensive soil map. Years of soil data have accumulated. Information has been gathered without a common standard to link government and other institutions. Without a standard measure

and shared frame of reference much of the past soil and resource data are useless.

I'm reminded of going through Australia by train some years ago, and changing trains in the middle of the night where one rail line ended and another began. Everyone and everything had to be unloaded and reloaded on the new train because the wheels didn't fit the new track system. Some of our resource data in California has been the same.

Cooperation of individuals and institutions is needed. Not only do we need engineers and technicians but we need sociologists, educators and land use professionals. The systems approach requires informing the public. Public support is needed to successfully compete in a political environment for the support required to properly research, staff and manage the opportunities of the Mediterranean Ecosystems.

It's time we establish an institute on the Mediterranean Ecosystem, (hopefully here in California). Ideally such an institute could be under the United Nations Environmental Programme. Such an institute would address the complex

problems of research and management of Mediterranean Ecosystems. It would consider the fuel and fiber potential of this environment as well as the problems of urbanization and people pressures on the land. Such an institute located in this state, ideally cooperative with but independent of government, could coordinate and stimulate understanding and improved management of these lands.

Some may regard the idea of an institute as unreasonable at this time. Cynical people say it is impossible considering budget problems today. But consider what has happened with California's new 20-year plan to upgrade natural systems. This is a time of broad cutbacks in all other departments of government. Yet last week we secured \$67 million in new money for this year's beginning program and access to \$120 million annually in the future. Progress can be made when a project like investing in the future is sound, when the benefits are obvious.

We should do the same with an Institute on the Mediterranean Ecosystem. The time to start is today--I hope with this symposium.