## **Keynote Address: The Ecology of Growth and Development**

Lynn A. Greenwalt, National Wildlife Federation, 1400 Sixteenth St., NW, Washington, DC 20036–2266

Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies 47:4-7

"The Ecology of Growth and Development"—an extraordinary title that I thought never would arise out of a fish and wildlife professional's organization, because we never really got around to talking about that over the years. We are very well acquainted with the phenomenon of exponential growth: alewives in Lake Michigan; the individual members of a red tide. We know about those things, but when it affects *Homo sapiens*, we tend not to want to talk about it. We tend not to want to face the facts that this last decade of this century is a pivotal one for our profession and indeed for what humanity knows and aspires to and can expect in the future.

Most of you, I imagine, are at or below 40 years of age. If you want to continue in this profession, I suggest you take to heart the preceding remarks. I mean that, because there may not be such a profession when you are my age and are in your dotage thinking about things that went on in the past, because there is a real possibility that things will have changed so dramatically for a variety of reasons beyond our control, that there will be little need for elderly fish and wildlife biologists here or any place else—or young ones either, dear friends. The issue is extraordinary.

I won't try to dwell for you upon the demographics of human population. You will have a speaker this afternoon who is far better equipped than I to do this sort of thing, and she does it with great accuracy and telling substance—Patricia Waak from the Audubon Society. I commend her words to your attention because they will be important.

However, please understand that one of the very serious implications of the issue of growth and development is that there are going to be more and more people demanding more and more of the resource base that makes everything possible to the degree that our traditions will no longer be applicable. What we are used to will no longer be the case. It is suggested that 5.6 billion people presently inhabiting this planet will double by the year 2035. I will be but a bittersweet memory in 2035, but a good many of you will be alive, and my children will be. And when there are 11 billion people on the planet, things will change dramatically.

I have suggested to people who live in the Washington area that if you are tired of standing in line to get your driver's license renewed, imagine what it will be like when there are twice as many of us. It won't be quite the same, but the principle will be similar. There will be people demanding much of the economy, and of society, and of the natural resource base, and we had better be thinking now about how we are going to deal with the inevitable, because, as Ms. Waak will tell you, the doubling of population by the year 2035 is not conjecture, it is inevitable. It is in momentum and it cannot be stopped, short of cataclysm. It will happen.

A good many of those people will live somewhere else. But, you should not take pleasure in the fact that the population increases will occur at a greater rate in other parts of the world, because there is rapidly becoming the reality that there is no other part of the world—we cannot get away from the consequences of things that go on on this shrinking planet of ours.

I hear people say to me that we must work to save the planet. Oh no, I'm not worried about the planet, that rock girded ball of molten iron will do its thing for a very, very long time. Its cargo, its freight of biological life, including ourselves and the things we enjoy in the habitats that support us, will disappear, perhaps, if we are not careful. But, the planet will continue to march around the sun as it always has. Don't worry about the planet. Worry about that thin film of green slime—us, on the surface of the planet. It may be vulnerable, it may go away. We need to make change, because the reality of development and growth is that, for example, those of us who are fortunate enough to be citizens of, and live in the United States, make up about 5% of the world's population, and we use annually 25% of the global energy production. We use resources at a disproportionate rate as compared to the rest of the world, and some day, someone is going to ask, "Why is that, where is the justice in that?" Some of you may have to answer that question.

How can it be that there is such wealth in one corner of the world, and a curious indifference to the lack of wealth in other corners of the world, when three-fifths of the human population lives in absolute poverty. Between now and this hour tomorrow morning, 40,000 children will have starved to death on this planet. Keep that in mind as you go to your banquets and barbecues and dinners. Every 24 hours 40,000 children starve to death. The third world, a term that is not popularly used anymore, the south, the developing world, is a very large part of the planet. It is not limited to places we see on CNN. The third world is represented right here in small blocks of poverty-stricken people on Indian reservations, and in parts of southeast Washington and other places that you can think of as readily as I, and are examples of the disparity that creates the problem we have when we talk about growth and development, and the ecology thereof.

We live in an interesting, challenging world where it is necessary to recognize, as if you could visualize in your mind's eye, a graph—the consumption of resources and the amount of resources available and those lines are converging. When those lines cross, there is a point in history at which it is fair to say that total collapse will ensue shortly. Then, it makes it less important to worry about whether or not you can keep the north Georgia mountains relatively pristine, or maintain

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rockfish populations in the Chesapeake Bay. Things will have reached a pretty pass by that time that will make a lot of your efforts utterly academic and I guarantee you we will confront those realities unless changes are made, beginning soon.

Your leader, our leader, and I commend him for what he said, has stated the case dramatically well. We must begin to make change, to create change in the places where it is most difficult to do, right here in the human mind, in the aspirations and desires and expectations of our fellow man. It is not just to maintain turkey populations and the huntability of crows, yes or no or maybe, or the availability of geese, or the usefulness of the Chesapeake Bay. It is far more than that, because we are confronting a time when we cannot conceive of the kinds of changes that will occur. We must learn to live sustainably. We must learn to look at our own levels of consumption, as Pat Waak may tell you.

The birth of a child in the United States is the equivalent, depending on which comparison you make, of somewhere between 20 and maybe as many as 200 children in another part of the planet, because of the demands we make on the resources of the globe. So, don't look over the horizon and say well, if those people didn't reproduce so rapidly we would not have this problem. If we did not consume so assiduously, none of us would have quite so many problems.

Now, how do you make that change? Am I ready to give up my second car? Not unless I can steal the keys to it from my wife. Am I ready to give up vacations of the kind I can now afford because all of my children have left home? Not likely. We have to begin to think in terms of how to train ourselves to look, as some American Indians say, "Unto the seventh generation." The consequences of our actions have to be assessed into the future, so that we can understand better what the consequences are of having two cars or the necessity to live 26 miles from one's place of work, or why the solution seems to be in more roads and not rapid transit, and all the kinds of things that seem to have nothing to do with wild turkeys and rabbits and pheasants and trout and largemouth bass. What are part and parcel of the same dimension because we share the planet with these creatures, and, we alone can make the difference in the long run.

Now, I don't intend to harangue you with these stories and illustrations of how things are going downhill. I want to harangue you with the other dimension for a moment. I think that among those who make a living in various ways in this country—you folks, we folks—may be singularly attuned, capable of making a difference to lead the direction toward understanding what the consequences of not changing our ways really are. You can begin with the fact that maybe the opportunity to hunt regularly and with some assurance of success may decline as more and more people occupy what was once available for hunting.

I have a phenomenon. I live in Maryland, northwest of Washington. There is a phenomenon to which I refer occasionally in my speeches. The deer in my backyard—my backyard is deer habitat like the freeway out here is deer habitat. They have no place else to go. People come and look out my rear window and see the deer. Oh, see the deer. Isn't that remarkable. My heart breaks for the deer and for those people because those deer have had to cross three major highways and God

knows what kind of travail to get into my backyard, the last place in the world a self-respecting deer ought to turn up, and yet that's where they come. A great many deer are being displaced by growth and development.

There is the opportunity for development that does not require excessive growth. Herman Daly has talked about it. The development of the quality of life which does not necessarily require incessant economic growth. There are ways that you can teach yourself and your children, and their children, to enjoy life and have a quality of life that does not require an investment economically in the future resources in this planet. We can avoid eating the seedcorn, as they say, by being careful about how we use what there is around us, and how we teach each other to aspire and to realize those aspirations.

You people, you young men and women, most of you, young men and women, have the opportunity and the capability, and the contact with people to help begin to make the changes here that are required to assure that the ecology of growth and development is not just a rather peculiar title for the 47th Southeast Association of Fish and Wildlife Agencies convention, but really the beginning of a change in attitude, and the seizing of an opportunity to create change that is important, is exciting, and extraordinarily necessary. There is no alternative, in my judgment, unless you are satisfied to watch the world unfold and decompose and collapse around you—not for you, but for your children.

Now. good people, folks in our business have had a noble calling, a noble profession, working for the future with natural resources. What could be better? What could be more rewarding? What could be more inspiring for anyone? Now we have a chance to make the culmination of that kind of profession an extraordinary contribution to society because it must be done. If we look over the horizon and beyond our borders, we watch nations struggling, striving to improve their lot so that their aspirations are not for a second car and an occasional vacation, but for the assurance of a meal tomorrow and into the future. In the absence of that assurance, then the natural resources with which the world is gifted are doomed. There is no greater enemy to the environment than poverty. And, that applies whether it is in Somalia, or the Sudan, or Bolivia, or in southeast Washington. There is no greater enemy to the environment than poverty.

We have to change things. We must be prepared to change things. We must be prepared to react to the unfolding that goes on around us and, in your case, to be a part of it. No, I won't belabor you any longer, but I will commend you to the remarks just made—exactly on point, precisely identifying the difficulty, and outlining for you some ways you men and women can make a difference. I urge you to do it, because it is in keeping with the nobility of our profession and the unique opportunities that we have, and because you do, in fact, owe it to the future.