

## **Keynote: Opening Welcome to the Meeting**

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It is an honor and pleasure for the soil and water conservationists of the United States of America to welcome you to this 10<sup>th</sup> Meeting of the International Soil Conservation Organization.

Why are we here this week? In today's modern world of genetic engineering, fast computers, and medical breakthroughs occurring on a regular basis, why should we be concerned about something as mundane as soil resources? We grow enough grain to feed the world. With the enormous problems of war and strife in Sierra Leone, Rwanda, Serbia, Ethiopia, the Middle East, and so many other places, why should we be worried about water? Most of the world's population has water enough to survive. The overall human condition continues to improve in terms of health and longevity. And aren't we in fact progressing? So what's the problem?

The problem is that soil degradation causes the loss of one of the most critical natural resources necessary for sustenance of human life on the planet. The loss of the national and global soil resource is insidious, and that resource once lost is forever lost. We often don't see the direct results of soil erosion and other forms of degradation either in terms of the physical markings on the land or on the human population. As thin layers of soil are stripped away in scales on the order of millimeters or centimeters, the process of erosion is like a disease, which remains undetected until the last stages - in other words - until it is too late. As the soil and water resources degrade in those places in the world where the situation is critical we see perhaps war and civil unrest, but how often do we stop to think about the underlying causes? How often does the public demand that we make the relatively small investment to preserve the world's soil and water resources in order to prevent the future, greater, and inevitable costs in terms of both dollars and human suffering. Economists and politicians can and do argue the long-term costs of soil erosion relative to the short-term and continuing costs of soil conservation practices. Regardless of the arguments made and the formulas used, two facts are unavoidable. Human population is increasing at a frighteningly high rate and the soil resource necessary to sustain that population is steadily decreasing. There is, ultimately, only one end point for that scenario.

The population of the world is currently 6 billion.

According to estimates of the U.S. Census Bureau, in the year 2050 the earth's population will be nearly 10 billion and continuing to grow.

How many people can the world's agriculture support? If everyone were to agree to live on a vegetarian diet, the arable land of the world would support approximately 10 billion. Currently an approximate 40% of the photosynthetic production on the land area of the earth is used or lost to support the human population. Were we to be able to somehow harness the full remaining photosynthetic production of the earth at the same level of efficiency, we would be able to support 15 billion people. Even so, that would leave little or nothing to support the other species of animals with which we share the planet. You and I may not be around in the year 2050 when the earth's population approaches 10 billion, but our children will be. Barring a worse catastrophe in the meantime, our grandchildren will live in an age when, for the first time, the carrying capacity of the planet for human habitation is effectively filled. The lesson for us, here, this week, is just this: every hectare of land counts.

Yes, the human condition overall is improving. But it does so by using up the natural resources of the earth. Soils are degrading at an alarming rate. The 1990 United Nations study on land degradation estimated that an area equal to 38% of today's global cultivated area has been damaged to some degree by agricultural practices since 1945. We literally mine the soil for food. Here in the state of Indiana, where the conservation ethic and conservation technologies are arguably as strong as anywhere on the earth, we still lose more than a kilogram of soil for every kilogram of grain produced. Even where we attain that elusive level of erosion control that we call "Soil Loss Tolerance", we still lose topsoil at a faster rate than it is formed.

The theme for this week's meeting is "Sustaining the Global Farm: Local Action for Land Stewardship". Our goal this week in hosting this meeting is that each of us will go home afterward with more of what we need to conserve the land and water resource base. We will share stories of success and failure. We'll talk science, economics, technology, policy, ethics, and sociology. The only thing that is asked of you is to go home and save the world. Remember: every hectare counts.

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