United States Department of Agriculture

Office of the Chief Economist
1400 Independence Avenue, SW
Washington, D.C. 20250-3810

Multistakeholder Dialogue on Implementing Sustainable Development
UN Department of Economic and Social Affairs, UN Headquarters, NY
Division for Sustainable Development, CSD Secretariat
Session 2: Strengthening International Cooperation and Partnerships
Keynote Presentation: "Capacity Building of Farmers through an e-Extension Model: Challenges and Opportunities"

Intervention for Monday, 1 February 2010, 1500 h.

Intervention Delivered by: **Dr. Carol Kramer-LeBlanc**, Director for Sustainable Development, Office of the Chief Economist, U.S. Department of Agriculture. Co-authored with **Dr. Greg Crosby,** National Program Leader for Sustainable Development, U.S. Department of Agriculture, National Institute of Food and Agriculture.

Extended text on which intervention is based:

Summary

The Commission on Sustainable Development in its 17th meeting, May 4-17, 2009, agreed on a number of important measures to boost agricultural productivity, improve soil quality and ensure the safety and nutritional quality of food, in ways that are socially, economically, and environmentally sustainable. It also recognized that an integrated approach linking post-harvest storage and processing, infrastructure for marketing and distribution, and capacity building at all levels and stages is of high priority. CSD-17 explicitly recognized the importance of female and male farmers from farms of all sizes, farm workers, value chain workers and rural communities. It also spoke of the need to strengthen rural urban linkages in the context of food system planning. As many will recall, the negotiated agriculture text from CSD-17 called for measures to (a) enhance agriculture production, productivity and sustainability; to (b) create a strong enabling environment for sustainable agriculture; to (c) manage sustainably competing uses of water and land resources; to (d) develop sustainable agricultural value chains and improve farmers' and agro-industry enterprises access to and participation in markets; and to (e) provide secure access to food and social safety nets. With respect to rural development, land, drought, desertification and Africa, the Secretariat has done an extremely useful summarization of the agreed actions—which I will not repeat here but will merely note that the topics of capacity building and extension of research-based knowledge and experience with respect to each of these thematic areas is extremely well related to my topic of this afternoon.

Throughout the CSD 16-17 cycle, the United States emphasized three critical contributors to sustainable development. We highlighted the role of **research and education** in discovering

ways to address problems and to prepare the next generation. We focused on the vital importance of **empowering people and communities** to work together effectively. And we clearly acknowledged that **communication and information technologies (ICT)** can powerfully accelerate development progress. As a global community, we are now challenged to put together information platforms that can effectively help provide relevant research-based scientific information to those who need it in languages and forms that they can understand and use. At this time, it is my honor to turn to the topic of "Capacity Building of Farmers through an e-Extension Model: Challenges and Opportunities." In addition I will report on some of the follow-up activities undertaken by the United States and its partners to address other recommendations of the CSD-17 Agriculture Report.

Agreed Actions at CSD-17

Highlighting just a few of the specific agreed actions in the agriculture text challenges us to undertake new initiatives to get science based knowledge in the hands of those who need and can use it. From the text:
(a)(i) Employ science-based approaches, and local and indigenous knowledge, while undertaking research and development, to improve plant varieties, livestock, and soil. Encourage development and adoption of locally appropriate farming systems and agricultural practices;
(a)(ii) Promote the use of soil conservation and improvement techniques, including integrated nutrient management and nutrient use efficiency, especially to prevent degradation of vulnerable land and restore degraded land;
(a) (iii) Promote sound water management and saving in agriculture through efficient irrigation, water harvesting and storage, treatment and reuse;
(b) (iv) Strengthen research, education and extension that advances the practice of sustainable agriculture and rural development. Improve linkages among research, instruction in schools and universities, and diffusion of knowledge by extension services;
(b)(v) Expand agricultural extension services to help smallholders to access and take advantage of modern information and communication technology;
(b)(vi) Strengthen multi-stakeholder participation and partnerships in the development and implementation of the sustainable agriculture and rural development practices;
(c)(iv) Foster expanded scientific and technical cooperation, including North-South and South-South cooperation, in the development, inter alia, of sustainable bioenergy production, arid and semi-arid agriculture, and in combating desertification;
(d)(iii) Diffuse more widely pre- and post-harvest technologies to enable farmers in developing countries, including small-scale and women farmers, to realize greater value from their crops;
(d)(ix) Strengthen the assistance from the United Nations System and all relevant international organizations, appropriate to their mandates, to developing countries, to put in place the policies and measures to help farmers, particularly small-scale producers, increase production and integrate with local, regional and international markets.

Platform for Knowledge Sharing

We believe that this is an auspicious time for the world's leaders to devote some substantial thought and resources to harnessing the opportunities of ICT to use web-based delivery systems to "fast track" knowledge sharing for sustainable agricultural development. The challenge is to arrange a successful transboundary union of research and extension practitioners, information users and institutional and networking capacity. First, we must realize that countries differ greatly as to current capacity and information needs. Capacity includes institutional, technological, and human resource dimensions. The current state of capacity is something we as

a global community need to learn much more about, particularly varying research and extension capacity and institutional conditions for agriculture and rural areas. That said, there are some encouraging possibilities. I would like to share comments made by Dr. Burt Swanson of the University of Illinois who has recently embarked on the first study of global extension systems done in the last 20 years. (He conducted the last one.) He writes in personal correspondence:

"I really think the international e-Extension idea has considerable potential in serving the needs of agricultural extension systems in most developing countries. Given the rapidly changing global economy, the farming systems in most countries need to change and become more market-driven. The larger, commercial farmers will make these changes, but small-scale men and women farmers will be left behind. Two important problems where field extension workers in most developing countries need urgent help include: lack of adequate and appropriate pre-service and in-service training, and the lack of access to up-to-date technical, management and marketing information, especially for higher-value crops/products that urban consumers want to buy and consume. Both of these important problems could be addressed via an international eXtension platform."

He goes on to suggest that increased investments in agriculture and extension systems, particularly in food deficit countries, should integrate this innovative idea. Presently, field extension workers in most countries, if they exist, have very few resources to work with (e.g. neither program funds nor transportation and communication resources) and they have very little access to up-to-date technical, management and marketing information. Given the potential impact that such a useful global agricultural information system could have on national extension systems, this idea of an open, web-accessible extension platform has considerable potential merit with a long-term, sustainable impact on farm incomes and on improving rural livelihoods.

Also critical is the need for information relevant to different agroenvironmental zones. As we discussed in CSD-16-17, natural resource problems, including water and land use and quality, drought and desertification, are very serious in many regions already and will likely be adversely affected by climate change in the decades to come. Science-based knowledge relevant to adaptation in specific agroenvironmental zones must be generated and shared.

The U.S. Model of eXtension

Historically, the U.S. Cooperative Extension Service was authorized to meet the needs of a primarily rural, agrarian society for research-based information to improve farming, household economy and sanitation, and youth education. Extension work was done mostly face to face. In the United States, over 3,000 counties employed multiple county agents who, with the aid of State specialists and National program leaders, produced research-based information programs or answered questions for their local clientele. It was a labor intensive model and often many agents worked at inventing the same "wheel."

In the current era of reduced farm numbers and proportions of farmers in the population, reduced public budgets, and new ICT developments in general, planning began in 2002 for the U.S. eXtension system which would unite what is known as a **Community of Practice** in order to bring needed information to what is known as a **Community of Interest** using an internet platform. We will explain more about this now.

The "**eXtension Model**": eXtension is pronounced e-Extension with **eX** being a logo. eXtension is a collaboratively built internet learning environment delivering sound, science-based

information and education on a 24/7/365 basis, and is a vital part of the U.S. Cooperative Extension System. The whole notion of translating research findings into common practices, and teaching those practices to specific public audiences remains the business of extension. eXtension enables this to work more efficiently and effectively. The eXtension platform, coding, and content operate on an"open source" basis, meaning that the source code can be shared and the information and education on eXtension is open for use by anyone. This information and education platform www.extension.org is designed for direct interaction with targeted **public** audiences (such as farmers) as opposed to more internal extension and research audiences which characterize most existing extension web sites in the United States.

Central to the eXtension model is the forming of **Communities of Practice** (subject-matter experts mostly from land-grant universities) that respond to the needs of a particular target audience (such as farmers or households) or what we call a **Community of Interest** with information and education that they want and the way they want it delivered to them. Currently eXtension has over 45 Communities of Practice (COP) with over 35 launched for the public and available on the site. These COPs offer *Frequently Asked Questions*, *Ask the Expert*, *Decision Support Tools*, *Learning Modules* and *Courses* in a variety of media forms including video format.

Since the public launch of eXtension in February of 2008 over 3.4 million have viewed information and more than 2/3 of the 15,000 U.S. extension workers have eXtension IDs. Over 100 U.S. Land-grant Universities and Colleges support eXtension through a yearly assessment of funds. Just as interesting is the fact that over 20 percent of the hits on eXtension are from countries other than the United States. Another use of eXtension is as a source of information for university and college faculty and local field staff. Many extension staff are now empowered, some for the first time, with quick access to trusted, science-based practices and experts in over forty-five subject areas.

Increasingly, eXtension makes use of social networking sites to engage the public including *Facebook*, *YouTube*, *Twitter* and others. It also engages the use of "widgets" that direct the user more quickly to subject-matter of interest. Thus comes the notion of "cloud computing" where over 60 percent of people who view eXtension content never really see the eXtension home page, but connect with the information via a variety of other search engines.

One of the most interesting parts of eXtension is the "back office" feature http://about.extension.org such as collaborative wiki workspace used by members of the COP to repurpose and redesign existing (best-of-best) information into educational derivatives and opportunities most relevant to the targeted audiences. This science-based information is usually generated at institutions of higher education across the country, but membership in a given COP is open to other institutions, including the private sector. Web-based teleconferencing such as *Adobe Connect* is also available to work virtually and offer webinars for the public.

Applications of eXtension Model Internationally?

The question is: What are the features of eXtension that can to useful to other countries in providing ways of gleaning benefit from science and technology research, especially in agriculture, but also in rural development, value chain development and other topics?

The United States experience was to answer this question by writing a business case that offered cost benefit analysis and return on investment, benefits to partners and investors, as well as three

implementation models or ways of implementing the value statement. The business case provided the impetus for investment by the U.S. universities and by the U.S. Congress to support eXtension.

The United States commends the work being done by FAO and other international bodies to organize knowledge such as the www.e-agriculture.org in response to the World Summit on the Information Society. Uniquely, the eXtension model offers the tools that can allow subject-matter experts from around the world to tailor subject-matter from developed countries into more useful information and education for developing counties. The eXtension model also offers ways of delivering more relevant information more directly to consumers, producers, extension personnel, scientists, and policy-makers. eXtension is willing to work in partnership with all institutions and sources of information in the creation of relevant knowledge for developing countries.

Currently available eXtension COPs that may be more relevant to interests of developing countries include: goats, livestock and poultry waste, horticulture, equine, niche meat processing, organic, dairy, and entrepreneurship. COPs under development that might be useful to developing countries include: food safety, forestry and climate change, freshwater aquaculture, grapes, home energy, plant breeding, sustainable marine fisheries, and wood energy in development. This content is peer-reviewed by the members of the COP.

Challenges

- Linking Communities of Practice across borders and institutions
- Translating agricultural research information into usable multicultural extension information (including major languages) for Communities of Interest: who will do it and who will fund it?
- Extension information for whom? Priority target groups might include: district agents, farm organizations, women's organizations, community organizations, municipal officials, Ministry employees, private sector.
- Sustainability of extension systems: both PVO/NGO/ private firms and public systems. Funding of public agricultural extension systems fell out of favor in much of the world twenty years ago as attention turned to other issues. In the last ten plus years, project funding went to private contractors, firms, or NGOs—but, this approach also has sustainability problems.
- Need relevant information for the major different agro-environmental zones including crop selection, land use, conservation needs, etc.
- Need to provide relevant information for diversification into high value crops including sanitary and phytosanitary information
- Provide relevant market information for producer groups and value chain members
- Generate and provide relevant research for a variety of agricultural systems including low input and organic that may be more accessible to poor farmers
- Link servers with mobile devices (phones, PDAs) as well as computers. To do so we must resolve to solve some of the problems of interoperability between knowledge-sharing platforms

Opportunities

- Attention has turned to agriculture as a result of the fact that the number of hungry people has now grown to over 1 billion and population growth threatens to outstrip sustainable productivity growth
- Governments and donors now realize that they must continue to invest in agricultural research and extension
- Sub Saharan African countries, for example, have committed to increasing investment in agriculture through CAADP
- At the same time, international communication based on internet platforms is increasingly accessible
- Websites such as eXtension can provide access to science-based information, access to upcoming events, access to courses, access to "ask an expert" service
- Currently eXtension is facilitating communities moving into social media space or applications (twitter, my space, wikis (collaborative workspaces)).
- Utilize the Global Partnership on Nutrient Management as a model for development of collaborative global eXtension. The challenge will be to move from establishing a web based platform as an effective information tool – the immediate focus of activity – to using the Partnership to broker and foster concrete interventions and capacity building, including strengthened assessment.

Recommendations and Next Steps

1. Convene a collaboration of existing international organizations and partnerships most concerned with knowledge management and extension virtually or face-to-face to assess feasibility by developing a business case for a Global Extension Platform.

2. Invite such participants as FAO, IFPRI, UNEP, IFAD, WSIS, ADB, WB, CGIAR, SARD, ILC, SIANI, BMGF, U.S. eXtension, USAID, MCC and others. This could be hosted by the Sustainable Development Knowledge Partnership.

3. Form Global Communities of Practice (groups of subject experts from developed and developing countries) around the subject-areas of particular relevance to developing countries that were addressed and agreed to by CSD 16-17.

4. Consider organizing COPs around cropping systems, agro-ecological regions, or a host of other dimensions such as nutrient management. Other subject matter might include: integrated pest management, land use planning and management, agriculture production and marketing, risk management, micro-credit and finance, post harvest technologies, erosion and saltwater intrusion, food handling, pastoral livestock production, and land tenure and rights. Other fruitful areas include: farmer organization building, cooperative structure, value chains, marketing, etc.

5. Target audiences in developing countries such as : small-holder farmers, women farmers, small and medium enterprise owners, extension personnel, private sector advisors, university faculty, formal school teachers, young people, scientists, and policy makers.

6. Develop swift assessment protocols of developing countries that include IT infrastructure, cell phone usage by consumers, producers, extension and other target audiences, extension capacity, cropping traditions, and a host of other criteria to determine the kind of content, level of presentation, and kinds of delivery modes that would be most effective in building the capacity to maintain an extension system.

Discussion: The idea of a Global eXtension Initiative could be pursued in terms of feasibility, business case, and proof of concept. This work could be coordinated under a number of existing partnerships such as the Sustainable Development Knowledge Partnership, and piloted by a number of international organizations, existing partnerships and development efforts currently underway. The primary notion is that there are several existing databases of science-based information, practices, and education that could be shared among and between organizations such as FAO, IFPRI, and U.S. eXtension with the right kind of intellectual property agreements. That information could be shaped, repurposed, and tailored by both the developed and developing countries through virtual Communities of Practice (global experts). This tailoring should align to a given developing country's needs based on a more comprehensive assessment of existing infrastructure that includes current cropping systems, governance, extension capacity, agro-ecosystems, markets, and many other factors. In general, the primary target audiences could be producers, extensionists, scientists, and policy makers in a given developing country with the notion of building and creating internal capacity to sustain this kind of effort internally without continuous infusion of funds from developed countries.

Additional Follow-Up Activities to CSD-16-17

Global Partnership on Nutrient Management

The first meeting of the partners of the Global Partnership on Nutrient Management was held in The Hague on October 22-23, 2009, hosted by the Ministry of Housing, Spatial Planning and Environment (VROM), of the Government of the Netherlands. The global landscape of nutrient issues, practices and research across the world's regions was discussed. Also agreed was a draft Action Plan for the Partnership along with a number of initiatives for the Partnership to foster in the short term. A steering committee was established to give structure and guidance, and opportunities identified for regional partnership meetings on the way to a full meeting of partners in Delhi in December 2010. The challenge will be to move from establishing a web based platform as an effective information tool – the immediate focus of activity – to using the Partnership to broker and foster concrete interventions and capacity building, including strengthened assessment. The meeting fostered an emerging 'community of nutrient stakeholders'. Interventions and activity will need to be complementary and focused going forward taking advantage of the role and expertise of key agencies and organizations in the nutrient field.

The U.S. Government and the Rome Food Summit Follow-Up

The United States joined others in adopting the Summit declaration. This represents a global consensus on a new approach to alleviating hunger and under-nutrition by harnessing the tremendous potential of agriculture to drive economic growth—entirely consistent with CSD-16-17. At L'Aquila the United States joined the G-8 in support of five principles for sustainable agricultural development. Now, for the first time, the entire membership of the UN has affirmed

these basic principles—the Five Rome Principles for Sustainable Global Food Security – that will shape and drive our actions for years to come.

The international community has shifted its focus to support country-led plans that channel resources to well-designed and results-based programs and partnerships. This approach to poverty and hunger involves both direct immediate action and medium and long term agriculture development. We've agreed that our efforts must be as comprehensive as the problems are complex, encompassing the entire range of agricultural activities—from lab to farm to market to table. Within this comprehensive approach we must give special attention to the needs of smallholder farmers, fisherfolk, and pastoralists, and the ultra-poor. In all our efforts we must give particular attention to women because we recognize that women feed the world.

As part of this comprehensive approach, our efforts must also continue to be responsive to emergencies and crisis situations, such as the aftermath of the earthquake now threatening food security and human health in Haiti. Humanitarian assistance, while addressing the immediate impacts of hunger, must also lay the foundations for longer-term solutions to food insecurity by protecting agricultural livelihoods, assets and investments that might otherwise be lost.

Such a comprehensive model already exists at the regional level. In 2003, African leaders made an historic pledge to increase their own investments in food security and agriculture-led growth through the Comprehensive Africa Agriculture Development Program—or, CAADP. By asserting responsibility for their own development needs, the leaders of Africa helped to launch a new model in which development is a shared commitment based on the needs of the people rather than the capabilities of donors. Recently, in Abuja, the USG and others committed to what amounts to a code of conduct in support of the implementation of CAADP. This code will help to ensure that our global commitments translate into **coordinated, sustained investments in country-owned agriculture and food security plans** within African countries and sub-regions.

In the Summit declaration, we also recognize that partnering with multilateral institutions, including a reformed FAO and a revitalized Committee on World Food Security will help provide strategic coordination and support at national, regional and global levels. The U.S. will invest in--and encourage others to contribute to--multilateral institutions that support agriculture-led economic growth.

For example, G20 leaders called for the establishment of a multi-donor trust fund – the Global Agriculture and Food Security Program – at their September Summit in Pittsburgh. The trust fund will provide critical financing for investments in country-led strategies and will draw on the expertise of institutions such as the World Bank, WFP, FAO, the African Development Bank, and IFAD. We look forward to working with potential recipient countries, development partners and civil society to operationalize the fund in the near future.

Lastly, we underscore the fact that the Declaration's shifts in focus and action are enduring. We—both donor and developing countries—commit ourselves to timely and sustained action, and welcome the declaration's emphasis on mutual accountability. The Obama Administration's response to global hunger and food insecurity wholeheartedly embraces the principles contained in the Summit resolution we have adopted in Rome, while at the same time, maintains our commitment to emergency food assistance.

In addition to maintaining the U.S. commitment to emergency and humanitarian aid, the United States stands behind our pledge and we will invest $3.5 billion of the $22 billion committed by

donors at L'Aquila and Pittsburgh, to catalyze agriculture-led economic growth in an environmentally sustainable fashion.

Strengthening Urban-Rural Linkages for Sustainable Development, Vibrant Markets, and Food Security

CSD-17 calls for strengthened linkages between country sides and their communities. Many CSD delegates had attended weekend activities at CSD-16 and CSD-17 highlighting linkages between NY regional and metropolitan agriculturalists and consumers.

In September of 2009, the USDA launched a new initiative **"Know Your Farmer-Know Your Food"** to initiate a national conversation between consumers and producers and to ensure that USDA programs are accessible to the entire range of agricultural producers, small, medium and large to strengthen regional and local food systems. That initiative includes enhancing farm-to-school programs to increase availability of fresh, local produce in school lunch programs. It also encourages investments in rural communities in food processing or other value-added facilities that can save or generate jobs and increase incomes.

On October 29, the USDA and Civil Society and International Organization partners held a seminar on the topic of urban rural linkages with speakers from FAO and UN Habitat along with Deputy Secretary of Agriculture Merrigan and others. At this meeting, interests in farm to school programs, green markets, and food policy advisory councils integrating rural, peri-urban and urban interests arose.

In New York City, highlighting ecosystem benefits, Secretary Vilsack and NYC Mayor Bloomberg recently announced a $2 million federal grant to create green jobs as part of the Million Trees NYC Campaign as urban forests and horticulture projects are undertaken.

Selected Ongoing USDA Sustainability and Stewardship Programs and Activities

- **USDA Council for Sustainable Development** -- facilitates inter-agency collaboration on the economic, environmental and social sustainability of food, fiber, agricultural, forest, and range systems. Provides a Departmental platform to discuss vital issues, set priorities, and share best practices. (See http://www.usda.gov/oce/sustainable.)

- **Science for Sustainability Research, Education and Extension:**
  Research for Agricultural Systems and Sustainability:
  http://www.ars.usda.gov/research/programs/programs.htm?NP_CODE=207
  http://www.ars.usda.gov/research/programs/programs.htm?NP_CODE=305
  http://www.nifa.usda.gov/fo/fundview.cfm?fonum=1134
  http://www.nrcs.usda.gov/technical/nri/ceap -- Conservation Effects Assessment Project is a multi-agency effort to quantify the environmental benefits of conservation practices used by private landowners participating in selected USDA conservation programs. The project consists of three components:
  (1) **National Assessment** - Providing national summary estimates of conservation practice benefits and assessing the potential for USDA conservation programs to meet the nation's environmental and conservation goals. Cropland, wetlands, wildlife, and grazing lands will be assessed.
  (2) **Watershed Assessment Studies** - Basic research on conservation practices in selected watersheds nationwide to provide a framework for evaluating and improving performance of national assessment models.

(3) **Bibliographies and Literature Reviews** - Current literature on conservation programs. Four literature reviews are being developed that will document what is known and not known about the environmental benefits of conservation practices and programs for cropland, fish and wildlife, wetlands, and grazing lands. (See http://www.ars.usda.gov/pandp/locations.htm?modecode=02-02-00-00.)

- **Sustainable Agriculture Information Resources**:
  http://afsic.nal.usda.gov/nal_display/index
  http://attra.ncat.org

- **Sustainable Agriculture Research and Educati**on (SARE) program has helped advance farming systems that are profitable, environmentally sound, and good for communities through a nationwide research and education grants program. SARE administers a competitive grants program and publishes a variety of print and electronic resources for farmers, agricultural educators, and consumers. (See http://www.sare.org.)

- **National Multi-stakeholder Roundtables** on forests, ranges, minerals, and water:
  http://www.sustainableforests.net
  http://sustainablerangelands.warnercnr.colcstate.edu
  http://www.unr.edu/mines/smr
  http://acwi/gov/swrr

- **Biobased Products Policy** to increase utilization of biobased renewable products by USDA and throughout the Federal Government by designation of eligible products:
  http://www.usda.gov/procurement/biobased/index.htm
  http://www.usda.gov/procurement/programs/biobased/biobased_finalrule.pdf
  http://www.usda.gov/procurement/programs/biobased/awarenessbrochure_may2006.pdf

- **Farm and Forestland Conservation Programs** to reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, protect farm and forest lands from conversion, and respond to forest health threats:
  http://www.nrcs.usda.gov/programs
  http://wwww.fsa.usda.gov/FSA/webapp?area=home&subject-copr&topic=crp
  http://www.fs.fed.us/spf

- **Integrated Pest Management** (IPM) reduces use of agricultural pesticides:
  http://www.ipmcenters.org
  http://ars.usda.gov/research/programs/programs.htm?NP_CODE=304
  http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1114
  http://www.nrcs.usda.gov/technical/nutrient.html

- **Agroforestry**. USDA's National Agroforestry Center accelerates application of agroforestry through a national network of partners. The network conducts research, develops technologies and tools, coordinates demonstrations and training, and provides useful information to natural resource professionals. One of its focus areas includes tree planting -- the right trees planted in the right places for the right reasons to add value to land-use systems. The Center's Working Trees theme promotes development of sustainable agriculture and communities. (See http://www.unl.edu/nac.)

- **Sustainable Forestry**. Certification programs were established to coordinate development of forest management standards for different bioregions, certify sustainable forest management practices, prevent illegal logging, and communicate these practices to consumers and influence their purchase decisions. Supporting organizations include the Forest Stewardship Council (http://www.fscus.org), Sustainable Forestry Initiative (http://www.sfiprogram.org), Rainforest Action Network (http://ran.org), and World Wildlife Fund (http://www.panda.org/what_we_do/footprint/forestry).

- **National Network of Sustainable Living Education**, U.S. Cooperative Extension System
  http://www.nifa.usda.gov/nea/nre/in_focus/susdev_if_living.html
  The National Network for Sustainable Living Education (NNSLE) was formed by Extension in 2004 to exchange information, develop core curricula, and cohesively integrate existing natural resource programming with sustainable living education. Currently, NNSLE is a coalition of USDA National Institute of Food and Agriculture and 70+ faculty at 28 land-grant universities. The NNSLE members published a public guide to Living Sustainably http://www.cof.orst.edu/cof/extended/sustain/, developed and taught training modules, published in refereed professional journals, created a searchable database of Extension sustainability materials http://www.anrep.org/tools, outlined guidelines for a green camps certification, and offered webinars on climate change education. Several new products are under development: 1) Walk Our Talk: What does sustainable living look like in the county Extension workplace?; 2) Low Carbon Neighbor--a multi-week workshop designed to support small, cohesive neighborhood or workplace groups wanting to explore life choices; 3) On-line Living Sustainably Course: 4) Climate Change Guide: and 5) eXtension Community of Practice on Sustainable Living.

****

###