
THE
HEINZ
CENTER

Meeting Summary
Interagency Meeting on Creating an
Operational National Land Cover Dataset
January 10, 2006

Summary

On January 10, 2006, the Heinz Center convened, at the request of the US Geological Survey, an interagency meeting to consider the need for and next steps toward revision of the framework and agreements under which the National Land Cover Dataset (NLCD) is produced. Attendees were from the Geological Survey, Environmental Protection Agency, National Oceanic and Atmospheric Administration, National Aeronautics and Space Administration and USDA Forest Service. See Attachment A for a listing of individuals and affiliations. Attachment B is the meeting agenda.

The meeting had two substantive elements. In the first, participants agreed that NLCD is a successful and valuable product, but one that would benefit from a structured commitment to regular and timely production in an “operational” mode, with strong linkages to relevant research and applications. In the second, participants agreed to establish an interagency (and potentially intergovernmental) working group to explore key issues and create a new agreement to govern operational NLCD production. Participants also discussed guidance that agency principals might give to this working group, identifying broad areas, including production and technical design/specification, governance and funding, relationship to research, and relationship to other data sets and data projects.

Need for a “Next Generation” NLCD

There was consensus among the participants that the process that had resulted in development of the NLCD, completion of the early-1990s edition and substantial progress toward an early-2000s version had worked well, but not well enough to enable users to rely upon timely completion of a product with defined characteristics. Participants were familiar with the burden the current funding strategy placed on those responsible for production, resulting in uncertainty regarding which components of the project might be completed and on what schedules. There was strong agreement that a new funding and business model was necessary. Participants agreed that NLCD needed to be managed in a sustainable, predictable, consistent, and transparent fashion. Participants also agreed that linkages between the NLCD effort and other relevant efforts at multiple scales were important.

Interagency Working Group

Participants agreed to establish a working group, initially comprised of representatives from the

¹ In the meeting and in this note, the term “operational,” should be taken to mean the “guaranteed, routine, and sustained delivery of established suites of monitoring data.” This definition is derived from the report of the First Annual Integrated Ocean Observing System (IOOS) Development Plan, a report of the National Ocean Leadership Council (December 2004, prepared by Ocean.US).

agencies participating in the meeting, but potentially involving other federal agencies, state governments² and others to be determined.

There was discussion of the structure of the working group, with a general agreement that there were two major spheres of work. The first involved technical issues, including product timing and specification, identification of user needs, linkages to other data efforts and to research, and the like. The second involves the overall “business model” for the effort, with a strong emphasis on funding strategies, identification of markets and users, and the like. This bifurcation of work was discussed as likely giving rise to two separate subgroups, probably with different agency representatives. While there was no final decision, it appeared likely that there would also be a policy-level group that might serve in an oversight capacity and report to the agency principals.

Guidance to the Working Group

The following points were noted as relevant to the scope and mission of the working group.

1. Membership should initially involve the agencies involved in the meeting. Other parties relevant to NLCD use, production, or enhancement should be added as appropriate. Agencies and other parties may elect to participate in some aspects of the overall working group agenda but not others.
2. The general goal of the working group is to develop a business plan or strategy that will result in creation and refinement over time of a set of national land cover data products. This is assumed to include one or more core products (i.e., the 30-meter version from the 1990s and 2000s) plus other products.
3. The plan should provide for production of the core products on a repeat cycle of five years or less, with other products potentially being on shorter or longer cycles as appropriate.
4. The plan should address the following issues, with others added as the working group determines or as requested by agency principals. It is important that the plan take a broad “systems view” of the NLCD, encompassing not only the definition of the product itself, but its data sources, users, collaborators, applications, funding commitments, and the like. See Attachment C.

Users, Uses, and Societal Benefits

- a. The plan should clearly articulate the major users of the NLCD, the major applications in which the data are used, and the key societal benefits obtained through this use.

Technical / Definition Issues

- b. Definition of the product. This includes identifying the core elements and their repeat cycle (5 years or less) and other products, including resolution and scaling issues, classification schemes, and quality control processes. Providing a tightly specified definition of the core products is especially important, since it may enable potential partners to undertake elements of the effort independently.

² These might include individual states and state-based groups such as the International Association of Fish and Wildlife Agencies, Western Governors Association, National Association of State Foresters, National Association of Counties, and similar groups.

- c. Evolution of the product. Identifying how NLCD products, particularly the core product, will be modified over time in response to changing technology or user needs, and how continuity with prior data series will be maintained as these enhancements are incorporated. Mechanisms for decision making about changes to the product(s) should be specified.
- d. Roles and responsibilities. The plan should identify key roles that may be played by partners in the effort. This will be an integral part of the business plan for NLCD (see item 4.g below).
- e. Linkage with other land cover reporting and analysis efforts. These include domestic efforts such as those related to drought and phenology; linkages to point data (e.g., EPA permitting and other location data and the proposed USGS database of permanent plots); the Federal Geographic Data Committee and “Geospatial One-Stop” efforts providing higher resolution data, imagery, and products; and similar efforts underway in state government. It also includes global efforts such as those under, for example, the Climate Change Science Program, the National Geospatial-Intelligence Agency, Global Terrestrial Observing System, and the International Standards Organization. The goal of this effort is to articulate the role played by NLCD in the larger arena in which there are multiple land cover efforts. It is not to either force NLCD to reconcile with all such other efforts, nor to have NLCD take on the missions of these efforts. Rather it is to ensure maximum coordination, coherence, and efficiency. This will also link to the recently-announced effort to develop a “long-term plan to achieve technical, financial, and managerial stability for operational land imaging”³.
- f. Linkage with research efforts. The plan should indicate how the NLCD effort will relate to government and extramural research efforts that are developing improved land use / land cover characterization techniques and methods, and uses and applications of land cover data.
- g. Data source issues. The plan should consider options for continuity in light of potential changes to the availability of the core Landsat data source.
- h. Data and product delivery. The plan should address the mechanisms by which various products will be made available to users.

Governance and Funding Issues

- i. Decision making regarding product design. The plan should articulate a decision making structure for changing the definition of NLCD products, particularly the core products, over time. (See also 4.b above)
- j. Funding needs and strategies: business plan. The plan should identify resource needs for both short- and medium-term (e.g. 5 and 10 years), and identify strategies for meeting these needs. These strategies should be creative and not limited to assumptions that all resources can or will be provided by the core agencies. Business models, such as those employed in the LIDAR arena (National Digital Elevation Team), where a tightly specified product is being developed by a wide array of partners, should be explored.

³ John Marburger / Office of Science and Technology memo, 12/23/05, re: Landsat Data Continuity Strategy Adjustment

- k. Decision making regarding funding. The plan should address how decisions will be made as to what resources will be provided by which partners in the overall program.
- l. Accountability and transparency. The plan should provide mechanisms for periodic reporting to all agencies engaged in NLCD production and refinement concerning progress toward key objectives and the uses to which contributed funds have been put.

Next Steps

Barbara Ryan, Associate Director, Geography, USGS, agreed to take appropriate steps to convene this working group. No decisions were made regarding the timeline for completion of the plan described here.

ATTACHMENT A

Attendees – January 10, 2006
National Land Cover Dataset Meeting

USGS:

Barbara Ryan
Nick Van Driel
Jonathan Smith

EPA

George Gray
Denice Shaw
Wendy Blake-Coleman
Jacques Kapuscinski

NASA

Ron Birk
Ed Sheffner

NOAA

Margaret Davidson
Miki Schmidt

Forest Service

Richard Guldin

The Heinz Center

Robin O'Malley
Christine Negra

ATTACHMENT B

Agenda Meeting on a “Next Generation” National Land Cover Dataset Agreement The Heinz Center January 10, 2006

Purpose: This meeting is being called because the success of the National Land Cover Dataset (NLCD) as a product with a wide variety of management and research applications requires the establishment of a “next generation” agreement to guide the development and enhancement of future NLCD products.

9:00 AM **Introductions, Brief Review of Purpose of Meeting and Agenda**

9:10 AM **Background: Existing Agreements Related to Production of NLCD**
Brief review of the original 1995 agreement establishing the Multi-Resolution Land Characterization Consortium (MRLC) and the 2004 agreement between USGS and NOAA regarding NLCD and Coastal Change Analysis Program (C-CAP).

9:20 AM **Discussion Of Core Concerns, Objectives, and Options**
Each principal will be afforded the opportunity to make comments on the following general topics:

- 1) *Concerns that have arisen in the context of the current agreements and production of the first and second NLCD rounds that argue for establishing a new agreement*
- 2) *Issues that should be considered in deciding whether or not to move forward with a new agreement*
- 3) *Issues or topical areas that should be considered as part of the drafting of a new agreement*
- 4) *The makeup of the parties to a new agreement and/or the composition of the group charged with drafting the new agreement*
- 5) *Timing of the initiation and completion of the process.*

10:20 AM **Discussion of General Guidance to a Working Group**
Participants will be provided with a draft general terms of reference for a working group, and provided an opportunity to comment on needed amendments.

11:00 AM **Wrapup Comments**

11:15 AM **Adjourn**

ATTACHMENT C

A Systems View of the National Land Cover Dataset

