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## **Congressional Record -- Senate**

**Thursday, February 27, 1992;  
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138 Cong Rec S 2575**

By Mr. PRESSLER:

S. 2297. A bill to enable the United States to maintain its leadership in land remote sensing by providing data continuity for the Landsat Program, by establishing a new national land remote sensing policy, and for other purposes; to the Committee on Commerce.

### **LAND REMOTE SENSING POLICY ACT OF 1992**

Mr. PRESSLER. Mr. President, today I am introducing legislation to revamp the Landsat Satellite Program. This legislation will accomplish two important public policy goals.

First, it will provide a permanent home for Landsat within NASA and the Department of Defense. Full commercialization of the Landsat Program cannot be achieved within the foreseeable future. This new home will provide a strong civilian satellite land remote sensing program which is vital to the national security of the United States.

Second, this legislation will define the Federal Government's Landsat data policy. This definition will ensure that data generated from land remote-sensing satellites funded by American taxpayers will be made available to users at prices that do not exceed the marginal cost of filing a specific request.

Mr. President, we need to act soon to correct the current policy of commercialization, or we could lose this priceless environmental research tool forever. In 1984, Congress passed the Land Remote-Sensing Commercialization Act, which was to have subsidized a private company to operate the Landsat system for a transition period, after which it was hoped the system would become commercially viable.

Commercialization was founded on the belief that a large commercial market for Landsat data would develop and commercial demand would then support the development, launching, and operation of future Landsat satellites.

That has never happened.

It was clear to many of us back in the early 1980's that commercialization would not work. But the only other political alternative was to terminate the program altogether. That would have been an even more tragic mistake. So I supported the 1984 act with some amendments even with the expectation and prediction that commercialization would fail. My overriding concern was to protect the technology. That has been preserved. As those of us who urged alternatives to commercialization predicted, the 1984 act caused data prices to skyrocket, scientific applications to decline dramatically, and the program faltered.

Before commercialization there were three general categories of users: private business, defense, and science. The latter has all but disappeared. Private sales have fallen drastically, as well. Defense simply pays the higher prices, adding to taxpayer cost.

We have ended up paying more for Landsat by subsidizing a monopoly. We tax private business to fund Landsat, then turn around and charge them again to purchase data. The Federal Government subsidizes the monopoly and then pays again to use that data. This legislation will restore the emphasis on availability to scientific researchers and other public interest users.

The goal of NASA's mission to planet Earth is to obtain a scientific understanding of the Earth on a global scale. This 15-year program will enable NASA to develop global models of the interaction of the Earth's atmosphere, oceans, and land.

Developing these models will require long-term, repeat measurements. By the time the first EOS platform is launched in 1998, integration of Landsat data could give global change researchers a 26-year head start in developing accurate global change models. Landsat data used as a baseline will improve the predictive global change models to be developed from EOS.

Mr. President, this legislation provides for the continuous civilian collection and utilization of land remote sensing data. This will provide a major benefit in studying and understanding human impacts on the global environment, in managing the Earth's natural resources, and in planning and conducting many other activities of scientific, economic, and social importance.

Mr. President, Senator Gore and I are united in the need to act quickly on this matter, and I look forward to swift Commerce, Science, and Transportation Committee action on this issue. We need action today to preserve this extraordinarily valuable 20-year investment. This legislation will firmly establish the Landsat Program as a complement to NASA's mission to planet Earth while ensuring that the United States preserves its leadership in land remote sensing.

Mr. President, I ask unanimous consent that the text of the bill be printed in the Record.

There being no objection, the bill was ordered to be printed in the Record, as follows:

### **S. 2297**

*BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED,*

#### **SECTION 1. SHORT TITLE.**

This Act may be cited as the "Land Remote Sensing Policy Act of 1992".

#### **TITLE I -- DECLARATION OF FINDINGS, PURPOSES, AND POLICIES**

##### **SEC. 101. FINDINGS.**

The Congress finds and declares that --

(1) the continuous civilian collection and utilization of land remote sensing data from space are of major benefit in studying and understanding human impacts on the global environment, in managing the Earth's natural resources, and in planning and conducting many other activities of scientific, economic, and social importance;

(2) a strong civilian satellite land remote sensing program is vital to the national security of the United States;

(3) the Federal Government's experimental Landsat system established the United States as the world leader in land remote sensing technology;

(4) the national interest of the United States lies in maintaining international leadership in civil satellite land remote sensing and in broadly promoting the beneficial use of remote sensing data;

(5) given the importance of the Landsat program to the United States urgent actions, including expedited procurement procedures, must be followed in order to provide data continuity;

(6) full commercialization of the Landsat program cannot be achieved within the foreseeable future, and thus should not serve as the near-term goal of national policy on land remote sensing;

(7) however, private sector involvement in land remote sensing is in the national interest of the United States;

(8) to maximize the value of Federal satellite land remote sensing programs to the American public, data generated from all land remote sensing satellites funded by the United States Government should be made available to users at prices that do not exceed the marginal cost of filling a specific user request; and

(9) the broadest and most beneficial use of land remote sensing data will result from maintaining policies of open skies and nondiscriminatory access to data.

## **SEC. 102. PURPOSES.**

The purposes of this Act are to --

(1) maintain the United States worldwide leadership in civil satellite land remote sensing, preserve national security, and fulfill international obligations;

(2) provide for a comprehensive civilian program of research, development, and demonstration to enhance both the United States capabilities for remote sensing from space and the application and utilization of such capabilities;

(3) establish a comprehensive and sustainable satellite land remote sensing program that will ensure the routine acquisition and widespread availability of high quality land remote sensing satellite data to meet the needs of national security, global change research, and other interested users;

(4) enhance the scientific use of remote sensing data in studying the Earth and its processes by providing continuity of data which are sufficiently consistent in terms of acquisition geometry, land surface coverage, spatial resolution, and spectral characteristics with previous Landsat data to allow comparisons for change detection and characterization; and

(5) promote, and not preclude, private sector opportunities in civil satellite land remote sensing.

## **SEC. 103. POLICY OF UNITED STATES.**

It shall be the policy of the United States --

- (1) to preserve its right to acquire and disseminate unenhanced remote sensing data;
- (2) to perpetuate existing United States' open skies and nondiscriminatory access to data civil satellite remote sensing policies;
- (3) to preserve our national security, to honor our international obligations, and to retain in the Federal Government those remote sensing functions that are essentially of a public service nature; and
- (4) to maintain a permanent, comprehensive Federal Government archive of global Landsat and other land remote sensing data for long-term monitoring and study of the changing global environment.

#### **SEC. 104. DEFINITIONS.**

For purposes of this Act:

- (1) The term "Landsat system" means Landsats 1, 2, 3, 4, 5, 6, and any successor civil land remote sensing space systems operated by the United States Government, along with any related ground equipment, systems, and facilities.
- (2) The term "Secretary" means the Secretary of Commerce.
- (3) The term "Administrator" means the Administrator of the National Aeronautics and Space Administration.
- (4) The term "nondiscriminatory access to data" means without preference, bias, or any other special arrangement (except on the basis of national security concerns pursuant to section 505) regarding delivery, format, financing, or technical considerations which would favor one buyer or class of buyers over another.
- (5) The term "unenhanced data" means land remote sensing data that are subject only to minimal data preprocessing.
- (6) The term "data preprocessing" means --
  - (A) removal of system- and sensor-created distortions in land remote sensing data; and
  - (B) the very basic calibration of spectral response with respect to such data.
- (7) The term "continuity of data" means the continued acquisition and availability of unenhanced data which are, from the point of view of the user, functionally equivalent or superior to the Enhanced Thematic Mapper data to be generated by Landsat 6.

### **TITLE II -- OPERATION AND DATA DISSEMINATION OF LANDSAT SYSTEM**

#### **SEC. 201. RESPONSIBILITIES.**

- (a) Operations. -- The Secretary, in coordination with the Administrator and the Secretary of Defense, shall be responsible for --
  - (1) completing and launching Landsat 6;

(2) arranging for the continued operation of Landsats 4 and 5 until Landsat 6 becomes operational; and

(3) acting expeditiously and fairly to modify any existing contracts which the Federal Government may have with private companies for the operation of Landsat vehicles and the marketing of unenhanced Landsat data that would otherwise prevent or inhibit the full implementation of this Act.

(b) Responsibility of Administrator and the Secretary of Defense. -- The Administrator and the Secretary of Defense, jointly, will be responsible for ensuring the continued operation of the Landsat system commencing on the date that Landsat 6 is declared operational. In cooperation with the Secretary under the provisions of paragraph (3) of subsection (a), they shall ensure that any and all modifications to existing contracts and responsibilities required by this Act are accomplished in an expeditious and equitable manner, with the best interest of all parties being considered. Specifically, the Administrator and the Secretary of Defense will --

(1) provide for and oversee the full operation of the Landsat 6 system once the Landsat 6 satellite is declared operational;

(2) provide for the development, launch, and operation of a Landsat 7 system that will provide continuity of data after Landsat 6;

(3) prepare and submit to Congress, within 120 days following the date of the enactment into law of this Act, a comprehensive plan which addresses management and funding responsibilities, systems development and operations, data archiving and dissemination, and commercial considerations associated with the Landsat program. This plan will be consistent with all aspects of this Act, prepared in coordination with other appropriate Government agencies, and reviewed by the National Space Council;

(4) define alternatives and prepare a plan for providing continuity of data beyond Landsat 7; and

(5) with support of the Department of Energy and other appropriate agencies, prepare a coordinated technology plan designed to improve the performance and reduce the cost of future Landsat systems.

(c) Disclaimer. -- The provisions of this section shall not affect the authority of the Administrator and the Secretary of Defense to contract for the operation of part or all of the Landsat system, so long as the Federal Government retains --

(1) ownership of such system;

(2) ownership of the unenhanced data acquired by the Landsat system; and

(3) authority to make decisions concerning operation of the system.

## SEC. 202. DISSEMINATION OF UNENHANCED DATA.

(a) Dissemination Policy. -- The Administrator and the Secretary of Defense shall implement a Landsat data dissemination policy, defined in the plan required by section 201(b)(3), that --

(1) ensures that existing Landsat data and future unenhanced data acquired by the Landsat system are routinely available to Earth and global change research scientists at costs that do not exceed the marginal cost of filling a specific user request;

(2) considers the reasonable and legitimate requirements of all segments of the satellite land remote sensing user community for access to unenhanced Landsat data; and

(3) ensures that copies of all unenhanced data acquired by the Landsat system are provided to the Secretary of the Interior for permanent preservation.

(b) Authority Not Affected. -- The provisions of this section shall not affect the authority of the Administrator and the Secretary of Defense to contract for the dissemination of data acquired by the Landsat system, so long as --

- (1) the Federal Government retains ownership of all unenhanced data acquired by the Landsat system;
  - (2) no exclusive marketing rights are extended to any contractor;
  - (3) the Federal Government retains the right to set pricing policy for unenhanced data;
- and
- (4) all other requirements of this section are met.

### **SEC. 203. FOREIGN GROUND STATIONS.**

The Administrator and the Secretary of Defense shall ensure that commitments existing on the date of the enactment into law of this Act to provide Landsat data to foreign ground stations, under terms of agreements between the Federal Government and nations that operate such ground stations are honored and, as appropriate, renewed.

## **TITLE III -- LICENSING OF PRIVATE REMOTE SENSING SPACE SYSTEMS**

### **SEC. 301. GENERAL AUTHORITY.**

#### **(a) Licenses for Private Sector. --**

(1) In consultation with other appropriate Federal agencies, the Secretary is authorized to license private sector parties to operate private remote sensing space systems for such period as the Secretary may specify and in accordance with the provisions of this title.

(2) In the case of a private space system that is used for remote sensing and other purposes, the authority of the Secretary under this title shall be limited only to the remote sensing operations of such space system.

(b) Prohibition. -- No license shall be granted by the Secretary unless the Secretary determines in writing that the applicant will comply with the requirements of this Act, any regulations issued pursuant to this Act, and any applicable international obligations and national security concerns of the United States.

(c) Review. -- The Secretary shall review any application and make a determination thereon within 120 days of the receipt of such application. If final action has not occurred within such time, the Secretary shall inform the applicant of any pending issues and of actions required to resolve them.

(d) Limitation. -- The Secretary shall not deny such license in order to protect any existing licensee from competition.

### **SEC. 302. CONDITIONS FOR OPERATION.**

(a) Requirement To Have License. -- No person who is subject to the jurisdiction or control of the United States may, directly or through any subsidiary or affiliate, operate any private remote sensing space system without a license pursuant to section 301.

(b) License Requirements. -- Any license issued pursuant to this title shall specify, at a minimum, that the licensee shall comply with all of the requirements of this Act and shall --

(1) operate the system in such manner as to preserve and promote the national security of the United States and to observe and implement the international obligations of the United States in accordance with section 505;

(2) make unenhanced data available to all potential users on a nondiscriminatory basis;

(3) upon termination of operations under the license, make disposition of any satellites in space in a manner satisfactory to the President;

- (4) promptly make available all unenhanced data which the Secretary of the Interior may request pursuant to section 502;
- (5) furnish the Secretary with complete orbit and data collection characteristics of the system, obtain advance approval of any intended deviation from such characteristics, and inform the Secretary immediately of any unintended deviation;
- (6) notify the Secretary of any agreement the licensee intends to enter with a foreign nation, entity, or consortium involving foreign nations or entities;
- (7) permit the inspection by the Secretary of the licensee's equipment, facilities, and financial records;
- (8) surrender the license and terminate operations upon notification by the Secretary pursuant to section 303(a)(1); and
- (9) (A) notify the Secretary of any "value added" activities (as defined by the Secretary by regulation) that will be conducted by the licensee or by a subsidiary or affiliate; and  
(B) if such activities are to be conducted, provide the Secretary with a plan for compliance with the provisions of this Act concerning nondiscriminatory access.

### **SEC. 303. ADMINISTRATIVE AUTHORITY OF THE SECRETARY.**

(a) Authority of Secretary. -- In order to carry out the responsibilities specified in this title, the Secretary may --

- (1) grant, terminate, modify, condition, transfer, or suspend licenses under this title, and upon notification of the licensee may terminate licensed operations on an immediate basis, if the Secretary determines that the licensee has substantially failed to comply with any provision of this Act, with any regulation issued under this Act, with any terms, conditions, or restrictions of such license, or with any international obligations or national security concerns of the United States;
- (2) inspect the equipment, facilities, or financial records of any licensee under this title;
- (3) provide penalties for noncompliance with the requirements of licenses or regulations issued under this title, including civil penalties not to exceed \$10,000 (each day of operation in violation of such licenses or regulations constituting a separate violation);
- (4) compromise, modify, or remit any such civil penalty;
- (5) issue subpoenas for any materials, documents, or records, or for the attendance and testimony of witnesses for the purpose of conducting a hearing under this section;
- (6) seize any object, record, or report where there is probable cause to believe that such object, record, or report was used, is being used, or is likely to be used in violation of this Act or the requirements of a license or regulation issued thereunder; and
- (7) make investigations and inquiries and administer to or take from any person an oath, affirmation, or affidavit concerning any matter relating to the enforcement of this Act.

(b) Right to an Adjudication. -- Any applicant or licensee who makes a timely request for review of an adverse action pursuant to subsection (a) (1), (3), or (6) shall be entitled to adjudication by the Secretary on the record after an opportunity for an agency hearing with respect to such adverse action. Any final action by the Secretary under this subsection shall be subject to judicial review under chapter 7 of title 5, United States Code.

### **SEC. 304. REGULATORY AUTHORITY OF THE SECRETARY.**

The Secretary may issue regulations to carry out the provisions of this title. Such regulations shall be promulgated only after public notice and comment in accordance with the provisions of section 553 of title 5, United States Code.

### **SEC. 305. AGENCY ACTIVITIES.**

(a) **Private Systems.** -- A private sector party may apply for a license to operate a private remote sensing space system which utilizes, on a space-available basis, a civilian Federal Government satellite or vehicle as a platform for such system. The Secretary, pursuant to the authorities of this title, may license such system if it meets all conditions of this title and --

(1) the system operator agrees to reimburse the Government immediately for all related costs incurred with respect to such utilization, including a reasonable and proportionate share of fixed, platform, data transmission, and launch costs; and

(2) such utilization would not interfere with or otherwise compromise intended civilian missions of the Federal Government as determined by the agency responsible for such civilian platform.

(b) **Assistance.** -- The Secretary may offer assistance to private sector parties in finding appropriate opportunities for such utilization.

(c) **Agreements.** -- To the extent provided in advance by appropriation Acts, any Federal agency may enter into agreements for such utilization if such agreements are consistent with such agency's mission and statutory authority, and if such remote sensing space system is licensed by the Secretary before commencing operation.

(d) **Disclaimer.** -- The provisions of this section do not apply to activities carried out under title IV.

(e) **Authority of Commission Unaffected.** -- Nothing in this title shall affect the authority of the Federal Communications Commission pursuant to the Communications Act of 1934, as amended (47 U.S.C. 151 et seq.).

## **SEC. 306. TERMINATION.**

If, by December 31, 1999, no private sector party has been licensed and continued in operation under the provisions of this title, the authority of this title shall terminate.

## **TITLE IV -- RESEARCH AND DEVELOPMENT**

### **SEC. 401. CONTINUED FEDERAL RESEARCH AND DEVELOPMENT.**

(a) **Director To Continue Program.** --

(1) The Administrator is directed to continue and to enhance such Administration's programs of remote sensing research and development.

(2) The Administrator is authorized and encouraged to --

(A) conduct experimental space remote sensing programs (including applications demonstration programs and basic research at universities);

(B) develop remote sensing technologies and techniques, including those needed for monitoring the Earth and its environment; and

(C) conduct such research and development in cooperation with other Federal agencies and with public and private research entities (including private industry, universities, State and local governments, foreign governments, and international organizations) and to enter into arrangements (including joint ventures) which will foster such cooperation.

(b) **Environment.** --

(1) In order to enhance the United States ability to manage and utilize its renewable and nonrenewable resources and in order to develop remote sensing technologies and techniques required to study the Earth and monitor its changing environment and provide for national security,

the Secretary of Agriculture, the Secretary of the Interior, the Secretary of Defense and the Secretary of Energy are authorized and encouraged to conduct programs of research and development in the applications of remote sensing using funds appropriated for such purposes.

(2) Such programs may include basic research at universities, demonstrations of applications, and cooperative activities involving other Government agencies, private sector parties, and foreign and international organizations.

(c) **Research and Development.** -- Other Federal agencies are authorized and encouraged to conduct research and development on the use of remote sensing in fulfillment of their authorized missions, using funds appropriated for such purposes.

(d) **Reports.** -- The Administrator and the Secretary of Defense, in cooperation with other appropriate departments and agencies, shall develop and transmit to the Congress biennial reports which include --

(1) a compilation of progress in the relevant ongoing research and development activities of the Federal agencies; and

(2) an assessment of the state of our knowledge of the Earth and its atmosphere, the needs for additional research (including research related to operational Federal remote sensing space programs), and opportunities available for further progress.

## TITLE V -- GENERAL PROVISIONS

### SEC. 501. NONDISCRIMINATORY DATA AVAILABILITY.

(a) **Making Data Available.** -- Any unenhanced data generated by the Landsat system, or by any system operator under the provisions of this Act, shall be made available to all users on a nondiscriminatory basis in accordance with the requirements of this Act.

(b) **Information.** -- The Administrator and the Secretary of Defense and any other system operator shall make publicly available the prices, policies, procedures, and other terms and conditions (but not necessarily the names of buyers or their purchases) upon which the operator will sell such data.

### SEC. 502. ARCHIVING OF DATA.

(a) **Public Interest.** -- It is in the public interest for the Federal Government --

(1) to maintain an archive of land remote sensing data for historical, scientific, and technical purposes, including long-term global environmental monitoring;

(2) to control the content and scope of the archive; and

(3) to assure the quality, integrity, and continuity of the archive.

(b) **Duties of Secretary of the Interior.** -- The Secretary of the Interior shall provide for long-term storage, maintenance, and upgrading of a basic, global, land remote sensing data set (hereinafter referred to as the "basic data set") and shall follow reasonable archival practices to assure proper storage and preservation of the basic data set.

(c) **Criterion and Procedures.** -- In consultation with the Secretary of the Interior, the Administrator and the Secretary of Defense will include in the plan required in section 201(b)(3) the criteria and procedures by which --

(1) Landsat and other land remote sensing data will be added to the basic data set; and

(2) data in the archive will be made available to parties requesting data from the archive.

(d) **Authority Not Required.** -- Authority shall not be required from the Federal Communications Commission for the development and construction of any United States land remote sensing space system (or component thereof), other than radio transmitting facilities or components, while any licensing determination is being made.

(e) **International Obligations.** -- Frequency allocations made pursuant to this section by the Federal Communications Commission shall be consistent with international obligations and with the public interest.

#### **SEC. 505. NATIONAL SECURITY AND INTERNATIONAL OBLIGATIONS.**

(a) **National Security.** -- The Secretary of Defense shall act on all matters under this Act affecting national security. The Secretary of Defense shall be responsible for determining those conditions, consistent with this Act, necessary to meet national security concerns of the United States and for notifying the Secretary promptly of such conditions.

(b) **Secretary of State.** -- (1) The Administrator and the Secretary of Defense shall consult with the Secretary of State on all matters under this Act affecting international obligations. The Secretary of State shall be responsible for determining those conditions, consistent with this Act, necessary to meet international obligations and policies of the United States and for notifying the Administrator and Secretary of Defense promptly of such conditions.

(2) Appropriate Federal agencies are authorized and encouraged to provide remote sensing data, technology, and training to developing nations as a component of programs of international aid.

#### **TITLE VI -- PROHIBITION OF COMMERCIALIZATION OF WEATHER SATELLITES**

##### **SEC. 601. PROHIBITION.**

Neither the President nor any other official of the Federal Government shall make any effort to lease, sell, or transfer to the private sector, commercialize, or in any way dismantle any portion of the weather satellite systems operated by the Department of Commerce or any successor agency.

##### **SEC. 602. FUTURE CONSIDERATIONS.**

Regardless of any change in circumstances subsequent to the enactment of this Act, even if such change makes it appear to be in the national interest to commercialize weather satellites, neither the President nor any other official of the Federal Government shall take any action prohibited by section 601 while this title is in effect.