

**SIRRA** is a web-based analysis tool (available at <https://ff.cecer.army.mil/ff/sirra.do>) that provides an integrated, spatially aligned set of data for regions and networks (counties, watersheds, ecoregions, air flight routes) around military bases and ranges. The national data sets in SIRRA help identify relative vulnerability in ten sustainability issue areas: (1) air, (2) air space demand, (3) energy, (4) urban development, (5) threatened and endangered species (TES), (6) locational issues, (7) water, (8) economic issues, (9) quality of life, and (10) infrastructure. It can be used to compare a set of locations (bases and ranges), or to examine the region around a specific installation. The locational information (boundaries) of 308 bases and ranges are contained in the SIRRA database.

**Reference:** <https://eko.usace.army.mil/fa/serm/rsi/> and <https://ff.cecer.army.mil/ff/sirra.do>

Recent studies conducted by teams using SIRRA as an analysis tool include:

- **Global Restationing.** In 2004, a study of potential regional impacts related to the Army's global re-stationing initiative (19 bases)
- **Range and Base Siting.** In 2004, SERDP also assisted the Air National Guard by using SIRRA to analyze the location of a new bombing range in the western U.S.
- **Watershed Sustainability Analysis.** In 2005, SIRRA was modified to compare and analyze sustainability issues for watersheds nationwide, as part of a Civil Works research program related to regional watershed management. The results provide a valuable decision framework to help the Corps, Environmental Protection Agencies, states and others prioritize watershed management activities and also to understand stressors on waterways. A report providing the results is available at the 'on-line' beta version of the System-wide Water Resources Program (SWWRP) Watershed Notebook (<https://swwrp.usace.army.mil/DesktopDefault.aspx>).

**Reference:**

[http://www.cecer.army.mil/techreports/Jenicek\\_SIRRA\\_Watershed\\_TR/Jenicek\\_SIRRA\\_Watershed\\_TR.pdf](http://www.cecer.army.mil/techreports/Jenicek_SIRRA_Watershed_TR/Jenicek_SIRRA_Watershed_TR.pdf) and <https://eko.usace.army.mil/fa/serm/rsi/> and <https://ff.cecer.army.mil/ff/sirra.do>

- **Vulnerability Ranking of DoD Installations.** SERDP sponsored development of a SIRRA application that creates a roll-up sustainability index. This includes weighting of indicators taking into account the primary military mission of an installation. The result is a ranked set of 308 DoD installations. The report is currently in draft.
- **NEPA Screening Tool.** using SIRRA to assist in scoping of NEPA analyses.
- **Range Encroachment Analysis.** In November 2005 SIRRA was used by the OSD Sustainable Ranges program to help develop the Department of Defense encroachment analysis. The OSD study included all the Navy bases and ranges that are considered in the 320/366 report to Congress. The report is currently in draft.

● **Facility Sustainability Comparison.** SIRRA was recently used (early 2006) by NASA to compare triple bottom line (economics, environment, socio-cultural) issues around their U.S. based facilities. The purpose is to help NASA understand regional differences across their sites, and to provide input to decisions about where to locate specific mission activities. This study will also provide focus to National Environmental Policy Act assessments related to location decisions for mission activities. This NASA analysis was conducted under the direction of Sam Higuchi of NASA, by Jeremy Alcorn, Environmental Scientist, Science Applications International Corporation, 11251 Roger Bacon Drive, Reston, VA 20190, E-mail: [alcornje@saic.com](mailto:alcornje@saic.com), Phone: 703-318-4558, FAX: 703-318-4755.

**SIRRA Status:** SIRRA Version 1a is currently on the web and accessible to the public. SIRRA can be used by anyone – it does not require a login and password to access the site. Assistance with using SIRRA can be obtained from the U.S. Army Construction Engineering Research Laboratory (CERL).

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**Strategic Sustainability Assessment (SSA):** Derived from the new *Army Strategy for the Environment: Sustain the Mission—Secure the Future*, the SSA project aims to aid the establishment of a long-range vision for enabling the Army to meet its mission today and into the future. The project illustrates the use of a variety of research tools to provide strategic analyses for a given region. Its product is a series of ongoing, studies and reports that focus on specific regions or issues that enable the development of implementation plans and concepts for the Army Strategy for the Environment. The approach consists of a combination of forecasting and backcasting methods. Using historic and current trends, expectations are generated about what will happen in the future. This projected future is then compared to desirable futures. Using backcasting analyses, short-term and long-term actions are identified to alter the current path and ensure a desirable future is attained.

**SSA Status:** The SSA methodology has been applied to the Fall Line Region of the Southeast. Forecasting and identification of the desired future state is completed. Reiterations of backcasting incorporating recommended policy changes and mitigation strategies as assumptions are currently underway. The report of preliminary results is available on the ERDC/CERL web site.

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**Reference:** [http://www.cecer.army.mil/techreports/Jenicek\\_CERL\\_SR-05-12/Jenicek\\_CERL\\_SR-05-12.pdf](http://www.cecer.army.mil/techreports/Jenicek_CERL_SR-05-12/Jenicek_CERL_SR-05-12.pdf)