



# DOD SUSTAINABILITY PROGRAM

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**DR. JIM HARTMAN**  
**DOD REGION 5**  
**ENVIRONMENTAL COORDINATOR**



# U.S. Army War College Featured Publications – January 2012



## SUSTAINABILITY AND NATIONAL SECURITY

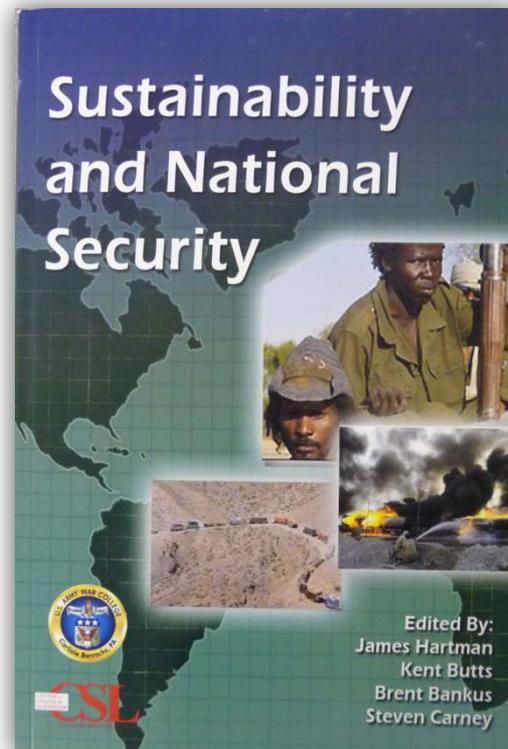
Dr. Jim Hartman

Center for Strategic Leadership, U.S. Army War College

*The views expressed in the document are those of the author and do not necessarily reflect the official policy or position of the U.S. Army War College, the U.S. Department of the Army, the U.S. Department of Defense, or the U.S. Government.*

## SUMMARY

*Dr. Jim Hartman's chapter, extracted from a newly published book of the same name, examines the evolution of the Army's sustainability program and its contributions to the national strategic security objectives. Growing world population and an imbalance of natural resources are expected to affect U.S., as well as Army, interests. Dr. Hartman asserts sustainability is the nexus to ensure future security, which can only be achieved through the development and implementation of sound business practices. Dr. Hartman opines the Army, as a large institution, is well suited to lead a whole of government approach to sustainability.*



DRAFT  
FOUO  
Predecisional



# GLOBAL MEGA TRENDS



## UNSUSTAINABLE PRINCIPLES AND PRACTICES ARE A THREAT MULTIPLIER

***POPULATION GROWTH + FINITE RESOURCES + CLIMATE CHANGE =***

***MIGRATION OF PEOPLE →→→ CONFLICT →→→ NATION STATE &  
REGIONAL INSTABILITY***



# SUSTAINABILITY A MISSION ENABLER



***“Having deployed over one million men & women in support of this nation’s longest ever fought war with an All-Volunteer Force, the Army is stressed. With an eye toward rebalancing the Force, sustainability has proven an effective tool for meeting operational requirements, while sustaining facilities and ranges, improving quality of life and reducing the burden on natural and man made systems on which we depend. Army leadership has also come to understand the potential for sustainability to strengthen national security”***

***- John McHugh, Secretary of the Army***



# SUSTAINABILITY BENEFITS



- **Framework for organizational continuous improvement**
- **Reduction of life-cycle cost**
- **Shrinkage of environmental & logistics footprints**
- **Reduction of risks & liabilities**
- **Enhancement of soldier, family and community quality of life**
- **Enhancement of battle field agility and stealthiness**

***It's simply about being better by enhancing mission capabilities while reducing both financial burden & risk.***



# OPERATIONALIZING SUSTAINABILITY



***“The business world now clearly sees sustainability as a means to reduce long-term risk, enhance competitiveness, and to reduce cost. Furthermore, government policy now sees sustainability as essential to both domestic well being and international security. Currently environmental, economic and social pressures are challenging businesses and federal and state agencies to determine how to make sustainability operational”***

***- Dr. Alan Hecht, USEPA, Director of Sustainable Development***



# EXECUTIVE ORDER 13514



**The Executive Order requires agencies to measure, manage, and reduce greenhouse gas emissions toward agency-defined targets. It describes a process by which agency goals will be set and reported to the President by the Chair of CEQ. The Executive Order requires agencies to meet a number of energy, water, and waste reduction targets, including:**

- 30% reduction in vehicle fleet petroleum use by 2020
- 26% improvement in water efficiency by 2020
- 50% recycling and waste diversion by 2015
- 95% of all applicable contracts will meet sustainability requirements
- Implementation of the 2030 net-zero-energy building requirement
- Implementation of the stormwater provisions of the Energy Independence and Security Act of 2007, section 438
- Development of guidance for sustainable Federal building locations in alignment with the Livability Principles put forward by the Department of Housing and Urban Development, the Department of Transportation, and the Environmental Protection Agency



# SUSTAINABILITY PLANS & REPORTING



- Under Executive Order 13514, Federal agencies were also asked to develop, implement and annually update a plan that prioritizes actions based on a positive return on investment for the American taxpayer and to meet energy, water, and waste reduction targets. Individual agency **Strategic Sustainability Performance Plans**, including DOD, are available on CEQ's webpage .
- On April 19, 2011, 24 Federal agencies and departments, including DOD, released, for the first time, the **Office of Management and Budget (OMB) Sustainability and Energy Scorecards**.



# NET ZERO AN ARMY SUSTAINABILITY PLATFORM



- The Army's Net Zero Installation Program is a strategy that strives to bring the overall consumption of resources on installations down to an effective rate of zero.





# ARMY NET ZERO – PHASE 1



## 2020 PILOT SITES

- Energy (7): Ft. Detrick (MD), Ft. Hunter Liggett (CA), Kwajalein Atoll (RMI), Parks Reserve Forces Training Center (CA), Sierra Army Depot (CA), West Point (NY), Oregon ARNG (statewide)
- Water (6): APG (MD), Camp Rilea (OR), Ft. Buchanan (PR), Ft. Riley (KS), JB McHord (WA), Tobyhanna Army Depot (PA)
- Waste (6): Ft. Detrick (MD), Ft. Hood (TX), Ft. Hunter Liggett (CA), Ft. Polk (LA), JB Lewis McChord (WA), USAG Grafenwoehr
- All (2): Ft Bliss (TX)&Ft Carson (CO)

## NET ZERO DEFINITIONS

- A Net Zero Energy Installation produces as much energy on site as it uses, over the course of a year.
- A Net Zero Water Installation limits the consumption of fresh water resources & returns water back to the same watershed so not to deplete the groundwater & surface water resources of that region in quantity or quality.
- A Net Zero Waste Installation reduces, reuses, & recovers waste streams, converting them to resource values with zero solid waste to landfill.
- A Net Zero Installation applies an integrated or holistic approach to management of energy, water & waste.



# ARMY NET ZERO BEST PRACTICES



A summary of Army Net Zero initiatives including best practices is posted on the Engineering Knowledge Online website:

<https://eko.usace.army.mil/public/fa/netzero/>

## Net Zero Energy:

- Fort Hunter Liggett Phase I – 1MW Solar Power System

## Net Zero Waste:

- Joint Base Lewis-McChord (JBLM) Concrete and Asphalt Recycling

## Net Zero Water:

- Tobyhanna Army Depot Wastewater Reuse and Water Chiller
- Water Conservation and Management – Fort Riley Doing Their Part
- Water Efficiency and Conservation on Fort Riley



# ARMY – EPA NET ZERO MOU (28NOV11)



**The MOU allows the Army to leverage EPA's Office of Research & Development (ORD) leading-edge research to evaluate cutting-edge technology.**

**The Army Plans to explore technologies and approaches that:**

- Increase efficiency & recovery of energy, water, and materials
- Incorporate design and use of green infrastructure
- Addresses social/behavioral components of culture
- Aid in our understanding of water, energy, and material flows & interactions
- Incorporate water and energy security, and climate-ready solutions
- Include the communities as partners in efforts to change the way the Army has traditionally managed these critical resources so that they are part of the process and can take ownership of solutions



# IN CLOSING



**“Pay attention: When the U.S. Army desegregated, the country really desegregated; when the Army goes green, the country could really go green.”**

**“Green is the new red, white and blue.”**

**-Thomas L. Friedman**

**NY Times columnist and Pulitzer Prize winning author**