

# NEW ITEMS IN THE NBMA RESOURCE LIBRARY

## Accurate accounting

## December 2016

### **TITLE: Water, Sanitation and Economy**

**Author:** Keller, S.

**Source:** <http://www.sswm.info/>

**Abstract:** Around the world, particularly in developing countries, diseases associated with poor water and sanitation still have a considerable impact on public health. It is essential to recognise the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failures in recognising the economic value of water has led to wasteful and environmentally damaging uses of this scarce resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources. It is economically wise to invest in water and sanitation infrastructure. Quantifying the costs averted and benefits gained from improvements in water and sanitation is difficult, but estimates show that the benefits far outweigh the costs of such investments.

**Document#:** MWN.EC.CO.5.1

### **TITLE: Soil carbon sequestration impacts on global climate change and food security**

**Author:** Lal, R.

**Source:** Science 2006 304:1623 DOI: 10.1126/science.1097396

**Abstract:** The carbon sink capacity of the world's agricultural and degraded soils is 50 to 66% of the historic carbon loss of 42 to 78 gigatons of carbon. The rate of soil organic carbon sequestration with adoption of recommended technologies depends on soil texture and structure, rainfall, temperature, farming system, and soil management. Strategies to increase the soil carbon pool include soil restoration and woodland regeneration, no-till farming, cover crops, nutrient management, manuring and sludge application, improved grazing, water conservation and harvesting, efficient irrigation, agroforestry practices, and growing energy crops on spare lands. An increase of 1 ton of soil carbon pool of degraded cropland soils may increase crop yield by 20 to 40 kilograms per hectare (kg/ha) for wheat, 10 to 20 kg/ha for maize, and 0.5 to 1 kg/ha for cowpeas. As well as enhancing food security, carbon sequestration has the potential to offset fossil-fuel emissions by 0.4 to 1.2 gigatons of carbon per year, or 5 to 15% of the global fossil-fuel emissions.

**Document#:** MWN.EC.CO.5.2

### **TITLE: Why General Mills, The Nature Conservancy say soil is sexy. Did we mention \$50 billion in benefits?**

**Author:** Hardcastle, J.L.

**Source:** Environmental Leader November 16, 2016 <http://www.environmentalleader.com/2016/11/21/why-general-mills-the-nature-conservancy-say-soil-is-sexy-did-we-mention-50-billion-in-benefits/>

**Abstract:** General Mills has been busy these past few months, pledging to halve its food waste by 2030, urging president-elect Donald Trump not to cancel the Paris climate agreement, and collaborating with other food giants to reduce suppliers' water use and improve sustainable agriculture practices.

The food company has also set its sights on something really sexy: improving soil health.

OK, maybe it's not as sexy as food waste or Donald Trump. But healthy soils could deliver nearly \$50 billion in annual economic benefits, according to General Mills and The Nature Conservancy, which have launched a 10-point roadmap to achieve this goal.

**Document#:** MWN.EC.CO.5.3

### **TITLE: Green space, urbanity, and health: how strong is the relation?**

**Author:** Maas, J., R.A. Verheij, P.P. Groenewegen, S. deVries, and P. Spreeuwenberg

**Source:** J. Epidemiol Community Health. 2006 60: 587-592

**Abstract: Study objectives:** To investigate the strength of the relation between the amount of green space in people's living environment and their perceived general health. This relation is analysed for different age and socioeconomic groups. Furthermore, it is analysed separately for urban and more rural areas, because the strength of the relation was expected to vary with urbanity.

**Design:** The study includes 250 782 people registered with 104 general practices who filled in a self administered form on sociodemographic background and perceived general health. The percentage of green space (urban green space, agricultural space, natural green space) within a one kilometre and three kilometre radius around the postal code coordinates was calculated for each household.

**Methods:** Multilevel logistic regression analyses were performed at three levels—that is, individual level, family level, and practice level—controlled for sociodemographic characteristics.

To request information or documents, please contact Sally Brown via e-mail: [slb@u.washington.edu](mailto:slb@u.washington.edu) or phone: (206) 616-1299.

**Main results:** The percentage of green space inside a one kilometre and a three kilometre radius had a significant relation to perceived general health. The relation was generally present at all degrees of urbanity. The overall relation is somewhat stronger for lower socioeconomic groups. Elderly, youth, and secondary educated people in large cities seem to benefit more from presence of green areas in their living environment than other groups in large cities.

**Conclusions:** This research shows that the percentage of green space in people's living environment has a positive association with the perceived general health of residents. Green space seems to be more than just a luxury and consequently the development of green space should be allocated a more central position in spatial planning policy

**Document#:** MWN.EC.CO.5.4

## **TITLE: Urban blight remediation as a cost-beneficial solution to firearm violence**

**Author:** Branas, C.C., M.C. Kondo, S.M. Murphy, E.C. South, D. Polsky, and J.M. MacDonald

**Source:** American J Public Health 2016 *doi: 10.2105/AJPH.2016.303434*

**Abstract: Objectives.** To determine if blight remediation of abandoned buildings and vacant lots can be a cost-beneficial solution to firearm violence in US cities.

**Methods.** We performed quasi-experimental analyses of the impacts and economic returns on investment of urban blight remediation programs involving 5112 abandoned buildings and vacant lots on the occurrence of firearm and nonfirearm violence in Philadelphia, Pennsylvania, from 1999 to 2013. We adjusted before–after percent changes and returns on investment in treated versus control groups for sociodemo- graphic factors.

**Results.** Abandoned building remediation significantly reduced firearm violence –39% (95% confidence interval [CI] = –28%, –50%;  $P < .05$ ) as did vacant lot remediation (–4.6%; 95% CI = –4.2%, –5.0%;  $P < .001$ ). Neither program significantly affected nonfirearm violence. Respectively, taxpayer and societal returns on investment for the prevention of firearm violence were \$5 and \$79 for every dollar spent on abandoned building re- mediation and \$26 and \$333 for every dollar spent on vacant lot remediation.

**Conclusions.** Abandoned buildings and vacant lots are blighted structures seen daily by urban residents that may create physical opportunities for violence by sheltering illegal activity and illegal firearms. Urban blight remediation programs can be cost-beneficial strategies that significantly and sustainably reduce firearm violence

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