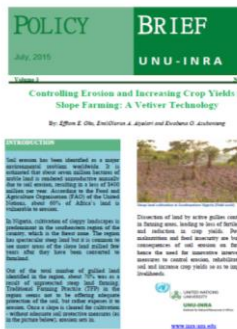


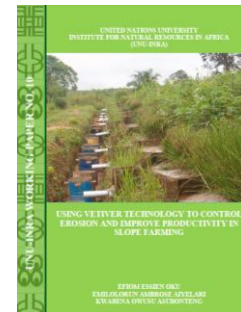
This bulletin highlights policy briefs, papers, articles and major news stories from UNU-INRA in 2015.

## Policy Briefs and Working Papers

Oku, E.E, Aiyelari, E.A, and Asubonteng, K.O. (2015). *Controlling Erosion and Increasing Crop Yields in Slope Farming: A Vetiver Technology*, Accra, UNU-INRA.



This policy brief reports on research that reveals that Vetiver Buffer Strip spacing at 5m reduced rainfall, soil and carbon losses on slope lands. The brief calls for the adoption of vetiver technology, awareness creation and capacity building of extension officers to improve knowledge on the use of vetiver technology on slope farms to mitigate greenhouse gas and climate change impact on crops.

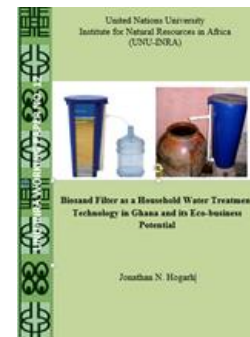


The brief is available at <http://collections.unu.edu/view/UNU:3141#viewAttachments>. The full paper can be downloaded at <http://collections.unu.edu/view/UNU:3167#viewAttachments>

Hogarth, J.N. (2015). *Biosand Filter: An Eco-efficient Household Water Treatment Technology and a Viable Eco-business Option*, Accra, UNU-INRA

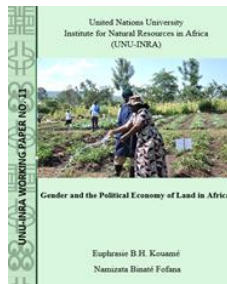


This research investigated factors that may influence the acceptability of biosand filter at the household level in rural communities in Ghana. The study further applied lifecycle environmental and cost assessment methods to analyse the eco-efficiency potential of biosand filter and examined prospects of leveraging this potential for green business development. The key demographic and socio-economic indicators of biosand filter acceptability were gender, age, education and wealth. Compared to local sachet water production, which was considered as an alternative to household application of the biosand filter, it was established that the latter had superior eco-efficiency, provided quite comparable profitability and was potentially viable for eco-business development.



The Policy brief is available at <http://collections.unu.edu/view/UNU:3349#viewAttachments> and the working paper is at <http://collections.unu.edu/view/UNU:3348#viewAttachments>. The paper was also published in the *Journal of Environmental Accounting and Management*, 3(4), 343-353, available at <https://lhscientificpublishing.com/journals/JEAM-Download.aspx>

Kouamé, E.B.H, and Fofana, N.B. (2015). *Gender and the Political Economy of Land in Africa*, Accra, UNU-INRA.



This paper draws attention to the political systems within which land tenure and property rights operate, especially for women. It also points out the main challenges in securing women's land rights in Africa and highlights the economic, social and environmental benefits of increasing women's access to land. Available at <http://collections.unu.edu/view/UNU:3302#viewAttachments>

## Journal Articles

Oku, E.E, Asubonteng, K.O, and Blege, P.K. (2015). "Role of Soil Properties and Precipitation Concentration in Enhancing Floods in Northern Ghana", *European Journal of Sustainable Development*, 4(2), 339-346.



The study assessed water infiltration rates and storage capacities of soils in the Northern and Upper East Regions of Ghana and their contributions to floods. A field infiltration test was carried out and precipitation concentration index (PCI) was estimated for over a 30 year period. Based on the findings, it was recommended that introduction of trees in combination of vetiver grass as an ecological tool could break and open-up the soil profile to allow more water intake and mitigate flood damage. The article is available at <http://ojs.ecsdev.org/index.php/ejsd/article/view/268>

Atewamba, C. and Nkuiya, B. (2015). "Testing the Assumptions and Predictions of the Hotelling Model", *Environmental and Resource Economics*, 1-35.



The authors empirically examined whether the assumptions and predictions of the Hotelling model are consistent with patterns observed in data. They considered non-linear functional forms for the extraction cost and resource demand to develop an empirical Hotelling model with technological progress and stock dependent extraction costs. Using panel data on fourteen non-renewable natural resources to estimate this empirical Hotelling model, different qualitative results were obtained as compared to the related literature. Evidence of stock-dependent extraction costs for most resources was found. There was no evidence against the linearity of the optimal extraction rate in the resource stock for almost all resources studied.

This is available at [http://link.springer.com/article/10.1007/s10640-015-9922-0?wtmc=email\\_event\\_1\\_SEM.ArticleAuthorOnlineFirst#](http://link.springer.com/article/10.1007/s10640-015-9922-0?wtmc=email_event_1_SEM.ArticleAuthorOnlineFirst#)

## News Articles

Atewamba, C. and Nutakor, P. (2015). *Natural Resources Can Drive Sustainable Growth*, UNU-INRA.



...A solid economic foundation will be critical for achieving the post-2015 agenda. Pathways will include the structural transformation of economies (which will involve decoupling natural resource use and environmental impacts from economic growth) and support for employment (especially where accompanied by rising labour productivity and decent work). These fundamental economic objectives are addressed in SDG #8: “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. ...In implementing the SDGs, it will be important to ensure that policies support the efficient use of natural resources, structural transformation in the labour market, and development of the manufacturing sector. This may be the only way to promote inclusive and sustainable economic growth, especially in Least Developed Countries (LDCs). [\[Read more\]](#)

Nutakor, P. (2015). *Freshwater Scarcity: Recapturing Africa’s Vital Resource*, UNU-INRA



...Though Africa is endowed with 63 spectacular trans-boundary river basins that cover 64 percent of the continent’s landmass, around 40% of sub-Saharan Africa’s 783 million people have [no access](#) to an improved source of drinking water. The region also has the [lowest](#) household daily water use per capita in the world; a consumption rate far below the UN minimum personal and domestic consumption level of 50 litres per day. ...Expressing his thoughts on how to address water pollution across the African continent, Dr Elias T. Ayuk, Director of UNU-INRA, noted that considerable investment is required to increase access to clean water and to improve sanitation and waste management in much of the developing world including Africa. ...Another approach that would have a huge impact is to boost innovative science and technology research, believes Dr Effiom Oku, Land and Water Resources Research Fellow at UNU-INRA. [\[Read more\]](#)

## Other Major News Stories

### *Education is Key to Disaster Risk Reduction – UNU Vice Rector*

Disaster risk management preparedness efforts should include education at different levels on risks prevention, coping and adaptation strategies. This, according to Prof. Jakob Rhyner, the Vice Rector of the United Nations University in Europe and Director of Environment and Human Security (UNU-EHS), will improve knowledge on risk management and cooperation from communities when disaster occurs. Prof. Rhyner made the suggestion during a presentation on the topic “*Future Challenges to Risk Management?*” at a seminar organized by UNU-INRA, in Accra, Ghana. [\[Read more\]](#)

### ***Addressing Wastewater Challenges with an African Bio-resource***

UNU-INRA held a seminar to discuss with stakeholders findings from a research on wastewater management. The seminar was on the theme “*Addressing Wastewater Challenges with an African Bio-resource*”. The research, which assessed the effectiveness of the African vetiver species “*Chrosopogon nitgritana*” in treating wastewater, reveals that the vetiver grass is effective in removing contaminants from wastewater. [\[Read more\]](#)

### ***Policy Implementation is Key for Africa’s Development***

Commitment to the implementation of natural resources management policies in Africa will help in enhancing the contribution of natural resources to the continent’s development. This was one of the key messages in the closing remarks of the Director of UNU-INRA, Dr. Elias T. Ayuk, at a book launch event organised by the Institute in Accra. Dr. Ayuk observed that there is a continuum of six I’s (ideas, innovation, incentives, institutions, infrastructure and implementation), which need to be addressed to promote development in Africa. [\[Read more\]](#)

### ***Climate Change Mitigation in Africa must be a Priority – UNU-INRA Director***

The Director of UNU-INRA, Dr. Elias T. Ayuk has called on African governments and other stakeholders in the agricultural value chain to take steps to mitigate climate change impact on food security in Africa. According to Dr. Ayuk, evidence from UNU-INRA’s [project](#) for ECOWAS and other reports suggest that climate impact may be severe, but some countries could see increases in crop production, for instance, in maize, while majority are very likely to become net importers of food if pragmatic measures are not taken, hence the need to allocate more resources to lessen the potential effects on food security. [\[Read more\]](#)



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