

Climate Change Adaptation - Peer Reviewed Journal

Articles

1. **Title: Increasing flood risk under climate change: a pan-European assessment of the benefits of four adaptation strategies. *Climatic change*, pp 1-15. Doi: 10.1007/s10584-016-1641-1.** Alfieri, L., Feyen, L., & Di Baldassarre, G. (2016).

Description: Future flood risk in Europe is likely to increase due to a combination of climatic and socio-economic drivers. Effective adaptation strategies need to be implemented to limit the impact of river flooding on population and assets. This research builds upon a recently developed flood risk assessment framework at European scale to explore the benefits of adaptation against extreme floods. Retrieved from <http://link.springer.com/article/10.1007/s10584-016-1641-1>

2. **Title: Managing for climate change on Federal lands of the western United States: perceived usefulness of climate science, effectiveness of adaptation strategies, and barriers to implementation. *Ecology and Society* 20(2): 17. Doi: 10.5751** Kemp, K. B., Blades, J. J., Klos, P. Z., Hall, T.E., Force, J. E., Morgan, P., & Tinkham, W. T. (2015).

Description: This paper explores the usefulness of climate change science for federal resource managers, focusing on the efficacy of potential adaptation strategies and barriers limiting the use of climate change science in adaptation efforts.

Retrieved from <file:///C:/Users/CLIMATE%20CHANGE/Downloads/ES-2015-7522.pdf>

3. **Title: Numerous Strategies but limited Implementation guidance in US local Adaptation Plans. *Nature Climate Change*. Doi: 10.1038.** Woodruff, S. C., & Stults, M. (2016).

Description: Adaptation planning offers a promising approach for identifying and devising solutions to address local climate change impacts. Yet there is little empirical understanding of the content and quality of these plans. We use content analysis to evaluate 44 local adaptation plans in the United States and multivariate regression to examine how plan quality varies across communities. We find that plans draw on multiple data sources to analyze future climate impacts and include a breadth of strategies. Most plans, however, fail to prioritize impacts and strategies or provide detailed implementation processes, raising concerns about whether adaptation plans will translate into on-the-ground reductions in vulnerability

Retrieved from <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate3012.html#access>

Climate Change Adaptation - Peer Reviewed Journal Articles

4. **Title: Climate variability and rural livelihoods: Assessing the impact of seasonal climate forecasts in Lesotho. *Area*, 35.4, 403-417.** Ziervogel, G., & Calder, R. (2003).

Retrieve from

http://www.csag.uct.ac.za/~gina/Gina_Ziervogels_publications/Publications_files/Zier_Calder_Area03.pdf

Description: Climate variability acutely affects rural livelihoods and agricultural productivity, yet it is just one of many stresses that vulnerable rural households have to cope with. A livelihood approach is used to assess the potential role that seasonal climate forecasts might play in increasing adaptive capacity in response to climate variability, using Lesotho as a case study. An examination of the assets and strategies that rural households employ enables a holistic assessment of the impact seasonal forecasts could have on rural livelihoods. This research thereby bridges macro-level variability with local-level impacts and adaptation to provide insight into the dynamics of forecast use and impact among vulnerable groups.

Key words: Lesotho, adaptive capacity, livelihood approaches, seasonal climate forecasts, climate variability.

5. **Title: Climate Change and Agricultural Production in South Africa: Impacts and Adaptation options. *Agricultural science*, 4 (10): Doi: 10.5539.** Maponya, P., & Mpandeli, S. (2012).

Description: The primary aim of the paper was to identify the impacts and adaptation options of climate variability and change on agricultural production in Limpopo province.

Retrieved from <http://www.ccsenet.org/journal/index.php/jas/article/view/17014>

Key words: climate variability, climate change, agricultural production, Limpopo, South Africa.

6. **Title: Supporting Agricultural Innovation in Uganda to respond to Climate risk: Linking Climate Change and Variability with Farmer Perceptions.**

Climate Change Adaptation - Peer Reviewed Journal

Articles

***Experimental Agriculture*, 47, pp 293-316. Doi: 10.1017/S0014479710000785.**

Osbahr, H., Dorward, P., Stern, R., & Cooper, S. (2011).

Description: This paper investigates farmers' perceptions of climate change and variability in southwest Uganda and compares them with daily rainfall and temperature measurements from the 1960s to the present, including trends in daily rainfall and temperature, seasonality, changing probability of risk and intensity of rainfall events.

Retrieved from

http://journals.cambridge.org/download.php?file=%2FEAG%2FEAG47_02%2FS0014479710000785a.pdf&code=88e6693022f5a5f09ea5e022a6df2e32

7. **Title: Improving water productivity in crop-livestock systems of drought prone regions. *Experimental Agriculture*, 47, pp 1-5. Doi:**

10.1017/S0014479710001031.Amede, T., & Tarawali, S., & Peden, D. (2011).

Description: This special issue of *Experimental Agriculture* presents evidence from Ethiopia, Zimbabwe and India, and captures current understanding of strategies to improve water productivity in drought-prone crop-livestock systems

Retrieved from

https://cgspace.cgiar.org/bitstream/handle/10568/3044/eag_intro.pdf?sequence=2

8. **Title: Adaptation strategies to climate change in the Arctic: a global patchwork of reactive community – scale initiatives. *Environmental Research Letters*, 9, pp 3. Doi: 10.1088/1748-9326/9/11/111006.**Loboda, T. V. (2014).

Description: Arctic regions have experienced and will continue to experience the greatest rates of warming compared to any other region of the world. The people living in the Arctic are considered among most vulnerable to the impacts of environmental change ranging from decline in natural resources to increasing mental health concerns. A meta-analysis study by Ford et al (2014 *Environ. Res. Lett.* 9 104005) has assessed the volume, scope and geographic distribution of reported in the English language peer-reviewed literature initiatives for adaptation to climate change in the Arctic. Their analysis

Climate Change Adaptation - Peer Reviewed Journal

Articles

highlights the reactive nature of the adopted policies with a strong emphasis on local and community-level policies mostly targeting indigenous population in Canada and Alaska. The study raises concerns about the lack of monitoring and evaluation mechanism to track the success rate of the existing policies and the need for long-term strategic planning in adaptation policies spanning international boundaries and including all groups of population.

Retrieved from <http://iopscience.iop.org/article/10.1088/1748-9326/9/11/111006/pdf>

9. **Title: Systematic review approaches for climate change adaptation research. *Regional Environmental Change*. Doi: 10.1007/s10113-014-0708-7.** Berrang-Ford, L., Pearce, T., & Ford, J. D. (2014).

Description: Recent controversy has led to calls for increased standardization and transparency in the methods used to synthesize climate change research. Though these debates have focused largely on the biophysical dimensions of climate change, human dimensions research is equally in need of improved methodological approaches for research synthesis. Systematic review approaches, and more recently realist review methods, have been used within the health sciences for decades to guide research synthesis. Despite this, penetration of these approaches into the social and environmental sciences has been limited.

Retrieved from

http://www.cakex.org/sites/default/files/documents/BerrangFord_Systematic%20Review.pdf

10. **Title: The status of climate change adaptation in Africa and Asia. *Regional Environmental Change*, 15:801. Doi: 10.1007/s10113-014-0648-2.** Ford, J. D., Berrang-Ford, L., Bunce, A., McKay, C., Irwin, M., & Pearce, T. (2015)

Description: Adaptation is a key component of climate policy, yet we have limited and fragmented understanding of if and how adaptation is currently taking place. In this paper, we document and characterize the current status of adaptation in 47 vulnerable 'hotspot' nations in Asia and Africa, based on a systematic review of the peer-reviewed and grey literature, as well as policy documents, to extract evidence of adaptation initiatives. In total, 100 peer-reviewed articles, 161 grey literature documents, and 27 United Nations Framework Convention on Climate Change National Communications were reviewed, constituting 760 adaptation initiatives. Results indicate a significant increase in reported adaptations since 2006.

Climate Change Adaptation - Peer Reviewed Journal Articles

Retrieved from <http://link.springer.com/article/10.1007/s10113-014-0648-2>

11. **Title: Efficient Adaptation to Climate Change. *Climatic Change*, 45: 583 – 600.**Mendelsohn, R. (2000).

Description: Firms and individuals will likely engage in substantial private adaptation with respect to climate change in such sectors as farming, energy, timber, and recreation because it is in their interest to do so. The shared benefit nature of joint adaptation, however, will cause individuals to underprovide joint adaptation in such areas as water control, sea walls, and ecological management. Governments need to start thinking about joint adaptation, being careful to design efficient responses which treat climate change problems as they arise.

Retrieved from

http://www.adaptation-undp.org/sites/default/files/downloads/efficient_adaptation_to_climate_change.pdf

12. **Title: Hard and Soft paths for climate change adaptation. *Climate policy*.**Sovacool, B. K. (2011).

Description: Amory Lovins' distinction between 'soft' and 'hard' paths of energy technologies is applied, mutatis mutandis, to humanity's efforts to adapt to climate change. It is argued that hard adaptive measures involve capital-intensive, large, complex, inflexible technology and infrastructure, whereas soft adaptive measures prioritize natural capital, community control, simplicity and appropriateness. The prevalence of these two types of adaptation pathways is illustrated through two case studies from the Maldives: The Safer Island Development Program and the Integrating Climate Change Risks Program. Policymakers must be aware that hard and soft adaptation measures may trade off with each other, and give both paths due consideration.

Retrieved from <http://www.adaptation-undp.org/sites/default/files/downloads/sovacool-cp-hardsoft.pdf>

13. **Title: Expert views of climate change adaptation in the Maldives. *Climatic change*. Doi: 10.1007/s10584-011-0392-2.**Sovacool, B. K. (2012).

Climate Change Adaptation - Peer Reviewed Journal

Articles

Description: This essay assesses the “Integrating Climate Change Risks into Resilient Island Planning in the Maldives” Program, or ICCR, a four-year \$9.3 million adaptation project supported by the Least Developed Countries Fund, Maldivian Government and the United Nations Development Program. The essay elaborates on the types of challenges that arise as a low-income country tries to utilize international development assistance to adapt to climate change. Based primarily on a series of semi-structured research interviews with Maldivian experts, discussed benefits to the ICCR include improving physical resilience by deploying “soft” infrastructure, institutional resilience by training policymakers, and community resilience by strengthening assets. Challenges include ensuring that adaptation efforts are sufficient to reduce vulnerability, lack of coordination, and the values and attitudes of business and community leaders.

Retrieved from <http://www.adaptation-undp.org/sites/default/files/downloads/sovacool-cc-maldives.pdf>

14. **Title: Improving adaptive capacity and resilience in Bhutan. *Mitigation and Adaptation Strategies for Global Change*, 16:515 – 533. Doi: 10.1007/s11027-010-9277-3.** Meenawat, H., & Sovacool, B. K. (2011).

Description: Bhutan, a small least developed country in the Himalayan Mountains, faces five current climate change related vulnerabilities: landslides and flooding, deteriorating agricultural production, impoverished forests, worsening health security, and impaired hydroelectricity generation. The country is attempting to adapt to these challenges through two globally sponsored adaptation efforts. One is the “Reducing Climate Change-induced Risks and Vulnerabilities from Glacial Lake Outburst Floods in the Punakha-Wangdue and Chamkhar Valleys” project, or GLOF, a \$7.7 million project being funded by the Global Environment Facility, United Nations Development Program, and the government of Bhutan. Another is the GLOF Risk Reduction Project in the Himalayas, or GRRP, a \$730,000 program funded by the United Nations Development Program (UNDP). These projects offer great potential for improving infrastructural, institutional, and community resilience within Bhutan, but must also overcome a series of pernicious social, political, and economic challenges if they are to succeed.

Retrieved from <http://www.adaptation-undp.org/sites/default/files/downloads/meenawatsovacool-masgc-bhutan.pdf>

Climate Change Adaptation - Peer Reviewed Journal Articles

15. **Title: Expert views of climate change adaptation in least developed Asia.**

Journal of Environmental Management, 97: 78 - 88. Sovacool, B. K., D'Agostino, A. L., Meenawat, H., & Rawlani, A. (2012).

Description: Drawing primarily from original data collected from more than 100 semi-structured research interviews, this study discusses the benefits of four climate change adaptation projects being implemented in Bangladesh, Bhutan, Cambodia, and the Maldives. The article begins by explaining its research methods and selecting a sample of Global Environment Facility-Least Developed Country Fund projects being implemented in Asia to analyze. It then describes ongoing adaptation efforts in each of these four countries. It finds that projects enhance infrastructural resilience by building relevant, robust, and flexible technologies. They build institutional resilience by creating strong, permanent, legitimate organizations in place to respond to climate change issues. They promote community resilience by enhancing local ownership, building capacity, and creating networks that help ordinary people learn and adapt to climate change. We find that all four of our case studies couple adaptive improvements in technology and infrastructure with those in governance and community welfare, underscoring the holistic or systemic aspect of resilience. Our study also demonstrates the salience of a functions-based approach to resilience and adaptive capacity rather than an asset-based one.

Retrieved from <http://www.adaptation-undp.org/sites/default/files/downloads/sovacool-et-al-jem-adaptation.pdf>

16. **Title: Sewing climate-resilient seeds: implementing climate change adaptation best practices in rural Cambodia. *Mitigation and Adaptation for Strategic Global Change, 16: 699 – 720.* Doi: 10.1007/s11027-011-9289-**

7.D'Agostino, A. L., & Sovacool, B. K. (2011).

Description: Multilateral support through programs like the Least Developed Countries Fund (LDCF) targets countries widely considered to be the most vulnerable to climate change. Cambodia is one of the six Asian LDCF recipients and with UNDP support is implementing the first adaptation project to arise from its National Adaptation Program of Action. Drawing on primary research conducted in August 2010 through interviews with key stakeholders, this article investigates the project

Climate Change Adaptation - Peer Reviewed Journal

Articles

for the likely benefits and challenges it will face in promoting institutional, infrastructural, and community resilience to climate change impacts. We find that the country's ongoing decentralization reforms offer an effective opportunity to mainstream climate change planning into sub-national government operations, but that competing priorities for immediate investment in education, roads, and healthcare may prevent government officers from sustaining a focus on preventative adaptation measures. We conclude that through careful planning, water resources infrastructure and agricultural practices can be designed to withstand climate variability and avoid the need to replace or rehabilitate systems whose specifications were prematurely determined by international donors.

Retrieved from <http://www.adaptation-undp.org/sites/default/files/downloads/dagostinosovacool-masgc-cambodia.pdf>

17. **Title: Building responsiveness to climate change through community based adaptation in Bangladesh. *Mitigation and Adaptation for Strategic Global Change*, 16:845 – 863. Doi: 10.1007/s11027-011-9298-6.**

Rawlani, A. K., & Sovacool, B. K. (2011).

Description: This article explores the drivers, benefits, and challenges to climate change adaptation in Bangladesh. It specifically investigates the "Community Based Adaptation to Climate Change through Coastal Afforestation Program," a 5-year \$5 million adaptation scheme being funded and implemented in part by the Government of Bangladesh, United Nations Development Program, and Global Environment Facility. The article explores how the CBACC-CA builds various types of adaptive capacity in Bangladesh and the extent its design and implementation offers lessons for other adaptation programs around the world.

Retrieved from <http://www.adaptation-undp.org/resources/peer-reviewed-article/building-responsiveness-climate-change-through-community-based>

18. **Title: Potential Climate Change Adaptation and Coping Practices for Agricultural Productivity in the Mountain Areas of South Western Uganda. *Journal of Scientific Research & Reports*, 7(1): 23-41, DOI:**

10.9734/JSRR/2015/16351. Zizinga, A., Tenywa, M. M., Majaliwa, J. G. M., Mugarura, M., Ababo, P., Achom, A., Gabiri, G., Bamutaze, Y., Kizza, L., & Adipala, E. (2015).

Climate Change Adaptation - Peer Reviewed Journal

Articles

Description: Agricultural productivity in Rwenzori mountain area is declining and undermining food security in the region. This trend has been accelerated in recent years due to rapid changes in climatic conditions. Climate change adaptation and coping practices are critical to identifying vulnerable entities and developing practical, well targeted adaptation practices and policies to improve agriculture productivity. However, it is currently poorly understood and not clear how to categorize and implement climate change adaptation practices. Little information is available on their potential impact and viability. This study was conducted to establish the viability and effectiveness of climate change coping and adaptation practices at different landscape positions in Rwenzori mountain areas of south western Uganda.

Retrieved from

https://www.researchgate.net/publication/276540706_Potential_Climate_Change_Adaptation_and_Coping_Practices_for_Agricultural_Productivity_in_the_Mountain_Areas_of_South_Western_Uganda

19. **Farmers' perception of and coping strategies to climate change: evidence from six Agro-ecological zones of Uganda. *Journal of Agricultural Science*; Vol. 5, No. 8.** Okonya, J. S., Syndikus, K., & Kroschel, J. (2013).

Description: In Uganda, weather-related events such as prolonged dry seasons, floods, storms, mudslides, extreme rainfall, and delayed/early rains have become more frequent and/or intense. This has left most of the rural poor farmers' food insecure and their livelihoods threatened. A total of 192 sweet potato farmer households distributed in six agro-ecological zones were interviewed to assess how farmers perceive the effects of changes in climatic variables, and how they have adjusted their farming practices to cope with the changes in climate. Gender of the household head and size of land owned significantly affected adaptation.

Retrieved from <http://www.ccsenet.org/journal/index.php/jas/article/viewFile/26639/17280>

20. **Challenges of Agricultural Adaptation to Climate Change in Nigeria: a synthesis from the Literature. *Field Actions Science Reports*** Enete, A. A., & Amusa, T. A. (2010)..

Description: Climate change is perhaps the most serious environmental threat to the fight against hunger, malnutrition, disease and poverty in Africa, mainly through its impact on agricultural productivity.

Climate Change Adaptation - Peer Reviewed Journal

Articles

This paper discusses the challenges of agricultural adaptation to climate change in Nigeria under the categories Hunger and Poverty; Agricultural funding for research and technology development; Traditional agricultural practices; Trade Liberalization and Market Development; Policies, Institutions and Public Goods; and Information and Human Capital.

Retrieved from <http://factsreports.revues.org/678>

21. **Title: Application of the TOA-MD model to assess adoption potential of improved sweet potato technologies by rural poor farm households under climate change: the case of Kabale district in Uganda. Food security. 6 (3) pp. 359-368.**

Ilukor, J., Bagamba, F., & Bashaasha, B. (2014).

Description: Sweet potato technologies that increase productivity, such as drought resistant varieties and virus free planting material are being promoted in order to reduce the vulnerability of poor farm households to climate change. In this paper, the Trade-off Analysis, Minimum Data Model Approach (TOA-MD) was used to assess the adoption potential of these technologies by resource poor farmers under climate change in Uganda. The model was calibrated and validated using household survey data collected in 2009 from Kabale district. To simulate adoption potential, the base system data was generated from household data and adjusted to reflect impact of climate change on crop yields and prices by 2050. The percentage increase in yields resulting from the use of climate resilient sweet potato technologies were used to estimate yields for alternative systems based on the results from sweet potato trials by the National Agricultural Research Organization (NARO), Uganda. Adoption potential of sweet potato technologies varied across altitudes. Compared with the high and lower altitudes, adoption potential is lowest at moderate altitude despite higher yields and lower costs of production.

Retrieved from <http://link.springer.com/article/10.1007%2Fs12571-014-0350-8>

22. **Title: A method for evaluating climate change adaptation strategies for small-scale farmers using survey, experimental and modeled data.**

Agricultural systems, 111 (2012) 85 – 95. Claessens, L., Antle, J. M., Stoorvogel, J. J., Valdivia, R. O., Thornton, P. K., Herrero, M. (2012).

Climate Change Adaptation - Peer Reviewed Journal

Articles

Description: Sub-Saharan Africa (SSA) is predicted to experience considerable negative impacts of climate change. The IPCC Fourth Assessment emphasizes that adaptation strategies are essential. Addressing adaptation in the context of small-scale, semi-subsistence agriculture raises special challenges. High data demands including site-specific bio-physical and economic data are an important constraint. This paper applies a new approach to impact assessment, the Tradeoff Analysis model for Multi-Dimensional Impact Assessment (TOA-MD), which simulates technology adoption and associated economic, environmental and social outcomes in a heterogeneous farm population for a regional impact assessment.

Retrieved from http://ac.els-cdn.com/S0308521X12000753/1-s2.0-S0308521X12000753-main.pdf?_tid=7b1d778c-441e-11e6-93dc-00000aab0f26&acdnat=1467881018_380b8e5398a5919a95f004cc0b28a607