Cash Transfers and Improved Water Access in Ghana's Upper West Region

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Policy Brief

Executive Summary

Water insecurity in sub-Saharan Africa significantly burdens women, impeding broader economic development. This brief demonstrates that Ghana's Livelihood Empowerment Against Poverty (LEAP) program, through unconditional cash transfers, substantially alleviates household water insecurity and promotes investments in durable water storage infrastructure. This improves daily living, builds resilience, and yields cascading benefits in health, education, and productivity. Notably, integrating cash transfers with women-focused credit programs significantly enhances positive water, sanitation, and hygiene (WASH) outcomes. Our research shows LEAP cash transfers reduce Household Water Insecurity Experience (HWISE) scores by 6.21 points, decreasing anxiety and improving hygiene. Beneficiaries are also nearly five times more likely to own water-storage containers. Women's participation in credit schemes further reduces water insecurity by 1.79 points and more than doubles container ownership. These findings highlight the profound power of integrating social protection with financial services for sustainable WASH benefits. Policymakers can leverage these synergies to accelerate progress towards Sustainable Development Goals 5 (Gender Equality) and 6 (Clean Water and Sanitation).

Snapshot: Water Security in Ghana's Upper West Region

Our research highlights the transformative potential of social protection on water security in Ghana's Upper West Region:

- **Improved Water Security:** LEAP cash transfers significantly improve household water security, reducing stress and enhancing hygiene.
- **Strategic Investments:** Transfers empower households to invest in durable water storage, improving resilience and water availability.
- **Compounding Effect of Credit:** Integrating women-centered credit schemes amplifies effects, alleviating financial constraints and strengthening collective WASH investments.
- **Pathway to Sustainable Water Security:** This combined approach offers a clear pathway toward sustainable water security for vulnerable communities.

1. The Global Challenge of Water Insecurity and Gender

Water insecurity in sub-Saharan Africa is a major barrier to economic empowerment and well-being, particularly for women. The time and energy women spend collecting water from distant or unsafe sources limits their educational and income opportunities, while exposing them to health risks and perpetuating poverty. Tackling this challenge calls for integrated solutions that can unlock wider development objectives such as gender equality, better health, stronger education outcomes and sustainable economic growth.

2. The Challenge: Ghana's LEAP Program and Under explored Impacts

Ghana's Livelihood Empowerment Against Poverty (LEAP) program provides unconditional cash stipends to extremely poor households across the nation. While LEAP has demonstrated success in reducing food insecurity and child malnutrition, its impact on improving household water access and investment in water infrastructure has remained largely unexplored.

This oversight represents a critical gap, given the direct link between household income, purchasing power, and the ability to secure reliable water sources and storage. Unconditional cash transfers are a powerful tool because they provide beneficiaries with the autonomy and dignity to address their most pressing needs, including water, hygiene supplies, and health services. This flexibility allows for demand-driven solutions at the household level. These brief addresses that critical gap, revealing how LEAP can directly enhance water security, contribute to the well-being of vulnerable populations, and unlock further development potential by reducing the daily burden of water collection and improving household hygiene.

3. Our Approach: A Natural Experiment

The study compared the water insecurity experiences of 267 LEAP recipient households with 290 matched non-recipient households from the Ghana National Household Registry. We utilized the Household Water Insecurity Experience (HWISE) scale to comprehensively measure both psychosocial dimensions (e.g., worry, stress) and functional aspects (e.g., quantity, quality, reliability of water supply, time spent collecting water) of water security[1]. We also assessed durable water-storage ownership and female participation in women-centered savings/credit schemes. Analysis employed both linear regression models for HWISE scores and logistic regression models for container ownership, adjusting for key household characteristics such as age, education, marital status, household size, and community-level clustering.

4. Key Findings: What We Discovered

Our findings show a statistically significant and profoundly positive impact of LEAP on household water security:

Outcome	***LEAP effect (β / OR)***	***Statistical significance***
HWISE score	β = 6.21-point reduction	p<.001
Container ownership	OR = 4.94	p<.001
Group credit: HWISE score	β = –1.79-point reduction	p=.007
Group credit: Container ownership	OR = 2.65 (95 % CI 1.73–4.05)	p<.001

LEAP participants saw a 6.12-point decline in HWISE scores, indicating substantial reductions in worry, skipped hygiene practices, and supply interruptions. Simultaneously, LEAP beneficiaries exhibit almost five-fold greater odds of owning durable water-storage containers (OR = 4.94), reflecting strategic asset purchases that buffer against unreliable water supply.

Community-based credit schemes provide complementary gains. Active membership yields a 1.73-point drop in HWISE and more than doubles container-ownership odds (OR = 2.65). This suggests that group savings alleviate financial constrains while empowering women to take collective action in WASH investments.

Regular cash inflows reduce the opportunity cost of water-security expenditures—enabling prompt bill payment, household plumbing connections, and container purchases. Further, credit groups offer flexible loans for larger investments. Together, these financial supports fortify both the psychosocial and infrastructural domains of water security.

5. Policy Implications & Recommendations: A Path Forward

To maximize the impact of social protection programs on water security and gender equality, we recommend the following actionable steps for policymakers:

(i) Integrate WASH Directly into LEAP: Pilot "LEAP + WASH" bundles that couple cash transfers with targeted water infrastructure support, such as periodic water-fee vouchers to cover utility costs or grants for durable storage and water treatment equipment. Such integration would ensure that cash transfers translate directly into improved water access and quality, providing a direct and measurable return on investment in public health.

(ii) Scaling Women-Centered Financial Services: Incentivising the expansion of credit groups for female LEAP beneficiaries through matching grants, which can significantly boost their capital base and collective agency. Concurrently, providing financial literacy and group governance training to ensure the long-term sustainability and effectiveness of these schemes and empower women in financial decision-making.

(iii) Strengthening Monitoring and Evaluation: Incorporating HWISE metrics and asset-ownership indicators into the LEAP Management Information System to track real-time progress and identify areas for improvement. Furthermore, conduct biennial mixed-method evaluations to capture qualitative insights and enable continuous program design refinement.

(iv) Fostering Cross-Sector Partnerships: Coordinate with key service providers like the Ghana Water Company Limited to align service delivery schedules with cash-transfer disbursements, ensuring that households have the means to pay. Additionally, engaging civil-society organizations to co-manage community storage solutions and microfinance initiatives can leverage local expertise ensuring culturally appropriate, sustainable interventions.

6. Conclusion

This research provides robust evidence that Ghana's LEAP unconditional cash transfers are an effective tool for significantly alleviating household water insecurity and driving investments in critical storage infrastructure. The synergy between these transfers and women-centered credit schemes underscores a vital lesson for development policy: integrating social protection with microfinance can yield lasting WASH gains, extending far beyond immediate relief to fostering long-term resilience and empowerment.

By embracing these findings and implementing the recommended policy actions, policymakers in Ghana and beyond can enhance water security, reduce gendered time poverty, empower women economically, improve public health, and accelerate progress towards achieving the Sustainable Development Goals 5 (Gender Equality) and 6 (Clean Water and Sanitation). This integrated approach represents a truly transformative path forward for sustainable development, building a foundation for healthier, more equitable, and prosperous communities.

7. References

1. Young, S. L., Boateng, G. O., Jamaluddine, Z., Miller, J. D., Frongillo, E. A., Neilands, T. B., & Wutich, A. (2019). The Household Water Insecurity Experiences (HWISE) Scale: Development and validation of a household water insecurity measure for low-income and middle-income countries. BMJ Global Health, 4(5), e001750. https://doi.org/10.1136/bmjgh-2019-001750

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