



## Science Technology Innovation Partnership

*Transforming  
Development  
in the Region*



### STIP Activities 1

- African Cashew Alliance 1
- CILSS/AGRHYMET 2
- STEWARD 3
- Power Africa 4
- CORAF / WECARD 5
- SIAPS 6
- PDEV II 7
- WASH 8

### Partnership and Funding Opportunities 9

### Upcoming Events 10

STIP Newsletter

Issue No. 1

October 2014

## USAID/West Africa partners with the African Cashew Alliance

Supporting value-added processing to develop a globally competitive, African cashew industry



Through a Global Development Alliance (GDA), USAID/West Africa partners with the African Cashew Alliance (ACA) to improve the competitiveness of the African cashew sector. About 48% of the world's cashews are grown in Africa. Over the last decade, African smallholder farmers have more than doubled production. With a yield of more than one million tons of raw cashew nuts (RCN) in 2012, Africa is now the world's largest producer of RCN. While relatively low in percentage terms, processing in Africa has grown from 35,000 metric ton (MT) in 2006 to 114,600 MT in 2012.

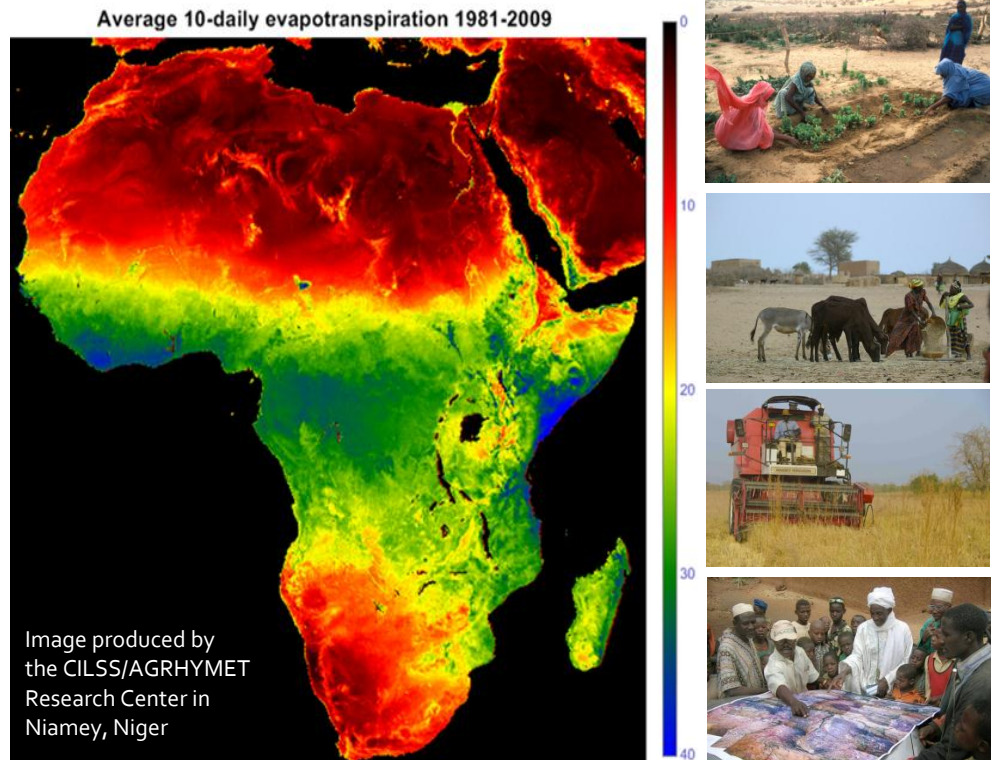
Established in 2006, the ACA promotes the region's cashew sector by facilitating investments in value-added processing in Africa. The Alliance currently consists of 198 dues-paying member companies ranging from producers to processors and international buyers. The ACA has facilitated the establishment of new cashew processing factories in the region, including the largest cashew factory in Africa. In collaboration with the world's largest cashew buyers – Kraft Foods, Intersnack, and Red River Foods – the Alliance developed the ACA Quality and Sustainability Seal program to assure

compliance with international food safety, quality and labor standards. This innovative program, the first of its kind in the world, directly improves the competitiveness of the African cashew processing industry. So far, the ACA has certified processors in nine countries across West and East Africa.

With support from USAID, the ACA has created 15,000 new jobs since 2011; facilitated more than \$500 million in cashew sales; and spurred \$90 million in new investments in the past three years.

# CILSS / AGHYMET strengthens resiliency in the region

Using remote sensing and GIS technology to help predict, adapt to, and recover from the changing environment



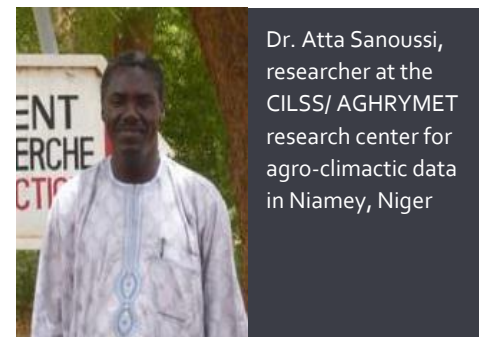
The Permanent Inter-State Committee for Drought Control in the Sahel (French acronym: CILSS) works to combat drought, desertification and food insecurity throughout West Africa. USAID’s assistance to CILSS has transformed the organization into the leading technical arm of the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union. CILSS lessens chronic vulnerability to climate change in West Africa by managing drought early warning systems, increasing farmer access to meteorological information, and disseminating regional agricultural data.

In collaboration with the U.S. Geological Society, USAID supports the CILSS/AGHYMET (AGRrometeorology, HYdrology, METeorology) Research Center in Niamey, Niger. A regional center for data analysis, AGRHYMET centralizes various agricultural and meteorological data from across the region. Its application of remote sensing and Geographic Information Systems (GIS) technology generates valuable land use

and land cover maps that contribute to broader efforts to build resiliency in West Africa. With USAID assistance, CILSS/AGHYMET works to:

- Highlight biodiversity hotspots;
- Manage an early warning systems for weather patterns and ecological crises;
- Analyze satellite images to map and quantify regional changes in land use and land cover over the last 40 years;
- Identify progress of re-greening efforts due to improved practices in natural resources management;
- Facilitate land use planning and zoning to protect coastal mangroves from overharvesting;
- Delineate areas for afforestation and reforestation to provide alternative wood supplies;
- Integrate agricultural, meteorological and trade data relating to food security throughout the Sahel; and
- Monitor changing land use patterns and the impact of land degradation, desertification and human use on the environment.

Through these endeavors, CILSS strengthens the ability of vulnerable populations across West Africa to predict, adapt to, and recover from changes in the environment. Regional institutions can better integrate climate change analyses and best practices into land use decision-making. Farmers now have more regular access to relevant information and appropriate technologies that mitigate climate risks and also increase their profit margins.



Dr. Atta Sanoussi, researcher at the CILSS/AGHYMET research center for agro-climactic data in Niamey, Niger



USAID-supported forest management activities in communities of the Upper Guinean Forest Ecosystem

## The STEWARD Program assists countries to reduce greenhouse gas emissions from deforestation

Improving forest management with accurate and more reliable data

To strengthen effective natural resource management (NRM) and land use planning in West Africa, USAID supports the development of accurate and timely spatially geo-referenced information on natural resources, biodiversity resources, climate changes and trends, infrastructural development, and human population dynamics. Regional data sources required to make informed decisions are generally lacking, compounded by the absence of data processing facilities, insufficiently trained personnel, and a lack of effective coordination/communication between national governments and regional institutions responsible for data collection, analysis and dissemination. These constraints contribute to poor land use planning which prioritizes short-term benefits over long-term sustainability. In its Adaptation Strategy, the mission's Regional Environment Team improves access to science and analysis for decision making, establishes effective governance systems for climate resilience, advocates for policy development and implementation, and identifies/disseminates best practices that increase resilience to climate change.

Through the Sustainable and Thriving Environments for West Africa Regional Development (STEWARD) Program, the Regional Environment Team applies a community sample plot technique to train local communities in improved forest management and also in monitoring, verification and reporting systems that improves the accuracy of measuring carbon stocks in their forests. This support has transferred important skills to community members to map their land boundaries and actively manage their community forests with more reliable data.

Focused on the Upper Guinean Forest Ecosystem, the STEWARD Program supports the NRM of 1.4 million hectares in Guinea, Sierra Leone, Liberia and Cote d'Ivoire. STEWARD assists countries to reduce greenhouse gas emissions, enhance sequestration of carbon associated with land use, improve the management of forests and reduce emissions from deforestation. The program's NRM interventions recognize the importance of establishing clear land tenure rights to mitigate conflicts over resources. Working with forest communities to build their resilience to climate change, STEWARD promotes agroforestry practices and works to secure traditional community land tenure regimes and mitigate "land grabs."

STEWARD also supports the Manu River Union (MRU) in assessing existing NRM laws across its four member countries plus Ghana, and has directly influenced the implementation of over 106 policies, laws and agreements promoting sustainable NRM. The program significantly advances trans-boundary conservation policy and laws on the governance of community forests and agroforestry zones. A tripartite agreement for the management of Mount Nimba forms the basis for developing joint activities, management planning and the harmonization of relevant regulations. STEWARD assisted the MRU to establish a trans-boundary conservation area between Sierra Leone and Guinea, and supported the creation of the Gola National Park in Sierra Leone as a catalyst for peace, prosperity and national pride in Sierra Leone. Thus far, 1.7 million tons of carbon dioxide have been sequestered as a result of USAID assistance in West Africa.

# Power Africa Initiative mobilizes partnerships and investments in the energy sector

Leveraging resources to expand access to power

## West Africa Regional Snapshot

- Regional electricity generation: 53,802 gigawatt hours (GWh) (end of 2012)
- Regional electricity demand: 93,493 GWh (end of 2013)
- Average annual electricity consumption: 88 kilowatt hours (kWh) per person, compared to the worldwide average of 2,400 kWh
- Household access to electricity: approximately 20%, ranging from a 40% average in urban areas to 6%-8% in rural areas



Cape Verde Islands wind farm

Photo Credit: ECOWAS Center for Renewable Energy and Energy Efficiency



West African Gas Pipeline construction

Photo Credit: West African Gas Pipeline Authority

The lack of reliable electricity presents a key constraint to increased trade and economic growth in West Africa. Underinvestment in the region's power sector has negative consequences for businesses, employment and, ultimately, poverty reduction. USAID/West Africa's Trade and Investment program aims to improve access to energy through increased investment in the sector and increased regional electricity trade.

### Power Africa – Presidential Initiative

A five-year, U.S. Government-wide initiative launched by President Obama in June 2013, Power Africa seeks to increase the supply of, and access to, reliable, affordable and cleaner power in Sub-Saharan Africa. Currently, the initiative seeks to add 30,000 megawatts (MW) of clean, efficient generation capacity and connect up to 60 million additional households to electricity across the continent. Power Africa provides incentives for energy sector reform and financing that enable high-impact infrastructure projects.

In support of the initiative, USAID works with partner governments to establish "delivery units" charged with completing high-impact investments; supply legal and technical assistance to complete priority transactions; carry out training to build capacity in critical energy institutions; and provide African leaders with seasoned senior political advisers to galvanize energy sector reforms.

### Initiatives in West Africa

USAID coordinates technical assistance with donors, multilateral development banks and the private sector in support of Power Africa. This work includes leveraging greater investment in clean energy generation, enabling cross-border trade of energy, and facilitating regional public-private partnerships (PPPs) that strengthen the energy infrastructure.

Viable clean energy and off/mini grid projects in West Africa have the potential to expand access to electricity in the region. Clean energy investment opportunities continue to attract the interest of private developers. Yet, project financing carries a large risk premium and high up-front costs, particularly for clean energy. Commercially viable projects are few and far between. To catalyze and incentivize greater private development of the energy sector, USAID provides technical assistance to developers, utility operators and regulators to facilitate private sector energy transactions, as well as to expand options for financing clean energy projects.

The mission also works with ECOWAS and its energy institutions, including the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) and the West Africa Power Pool (WAPP). USAID supports WAPP to address the regional inter-connectivity challenges of its member utilities. Technical assistance focuses on facilitating the development of WAPP's priority transmission and generation infrastructure; establishing/implementing market rules; and building capacity of the WAPP Secretariat and member utilities to operate a regional power pool. The mission also supports WAPP with advisory services to develop priority PPP power projects that will generate electricity using fuel from the West Africa Gas Pipeline supplied by Nigeria and potentially Ghana.

As a result of USAID assistance in West Africa, WAPP has leveraged over \$1 billion in transmission and infrastructure projects that regionally link the power grids of nine ECOWAS countries. USAID support to ECREEE has identified over 60 potential sites for solar and wind resources for 14 ECOWAS countries, of which five have been developed into viable business cases for development of an estimated 117.6 MW of power.

# CORAF / WECARD broadens scientific research

## Scaling Agricultural Technologies



A CORAF/WECARD field study on dual-purpose cowpea seed in Ghana

Created in 1987, the West and Central African Council for Agricultural Research and Development (CORAF/WECARD) seeks to promote the agribusiness sector by improving the efficiency and effectiveness of small-scale producers. The organization focuses on collecting and distributing agricultural data; developing new technologies; and scaling innovations to benefit farmers in the region. The research institute comprises 21 member states in West and Central Africa, for which it provides analytical and policy resources to encourage agricultural productivity.

With support from USAID, CORAF/WECARD conducts, coordinates and disseminates research on agricultural practices and improved seeds to member states and national research centers. Its work increases farmer access to information on food and farming systems, natural resource management, markets and trade, climate change adaptation, and bio-technology. The organization also focuses on scaling up agricultural technologies by sharing scientific research and new knowledge on agricultural

practices through non-governmental organization and extension platforms. Its scaling strategy identifies drivers of rapid change that lead to widespread benefits and adoption of innovative practices and technologies. (See Table below.) As a result, farmers in West Africa have received more and better information on best practices to improve their productivity, yield, crop quality and profit margins.

CORAF/WECARD widely disseminates best practices that positively impact performance of the agricultural sector across the region. For example, its research in Benin revealed that rice farmers can produce the same yield with half of the amount of mineral fertilizer when the planting of cowpeas precedes seasonal rice production. The organization has supported trials on high-yielding varieties of rice, maize and sorghum resistant to major biotic and abiotic stresses. They have also piloted efforts to improve the market quality of targeted cereal and processed meat products.

Scaling Innovations, Key CORAF/WECARD Technologies	
Technology	Scaling Up Methods
<p><b>Climate-smart Crop Varieties:</b> Submergence-tolerant rice, drought-tolerant sesame and maize, heat tolerant and high-yielding millet and sorghum, rust-resistant wheat.</p>	<p>Demonstration plots and engaging all value chain actors, from plant breeders to private sector partners, with an emphasis on commercializing new varieties.</p>
<p><b>Integrated Soil Fertility Management:</b> Crop and site-specific fertilizer recommendations, best practices to rehabilitate degraded land and preserve soil fertility, and urea deep-placement of fertilizer to maximize efficiency.</p>	<p>Extension training, demonstrations of conservative tillage and deep placement of fertilizer. Also training agro-dealers so that they can educate their customers on how to most efficiently use fertilizer.</p>
<p><b>Post-Harvest Quality Management:</b> Improved storage containers and post-harvest practices to reduce aflatoxin levels.</p>	<p>Demonstrating small-scale grain harvest machinery (stripper, thresher and winnower), which captures 90% of grain, dramatically reducing waste. Promoting the use of grain storage containers to prevent mold and aflatoxin.</p>



## SIAPS supports the development of an early warning system for medicine stock-outs

Strengthening health systems to assure the supply and use of HIV/AIDS pharmaceuticals and other commodities

A reliable and regular supply of antiretroviral (ARV) medicines is necessary to keep HIV-positive people healthy and help control the spread of the epidemic. Across the region, frequent stock-outs of ARVs and other drugs used to treat related opportunistic infections can prevent patients from staying on or starting life-saving treatment regimens. These stock-outs often stem from a lack of coordination between donors, governments and other partners, inadequate or underutilized supply chain information systems, and mismanagement of commodities.

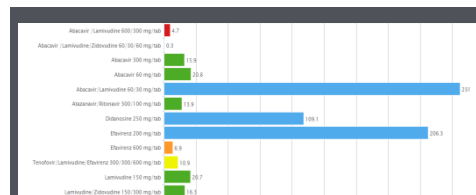
The USAID-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program strengthens pharmaceutical management systems in the region through the development of an early warning system (EWS) for medicine stock-outs and the establishment of regional coordination mechanisms. Operating in six West African countries (Benin, Burkina Faso, Cameroon, Guinea, Niger and Togo), the program works with national HIV and AIDS control programs to enhance the collection, analysis and use of supply chain data to promote a more coordinated approach to commodity procurement and delivery.

Engaging a variety of players in the pharmaceutical supply chain, SIAPS has developed an EWS to help avoid stock-outs of HIV and AIDS commodities and prevent wastage. Easily accessible online, this EWS (known as the HIV and AIDS Commodity Tracking Tool) accommodates a range of users and features a dashboard that collects/ displays regional data in a meaningful and easy-to-interpret way. Currently piloted in Benin, Burkina Faso, Cameroon, Niger and Togo, the dashboard allows users (e.g., program managers, ministry of health officials and representatives of donor agencies) to monitor commodity stock status, anticipate future funding gaps, respond to projected medicine shortages and expiration dates and make decisions based on accurate information. This dashboard is implemented in collaboration with the West Africa Health Organization (WAHO) as the organization begins to pre-position and support countries to avoid stock-outs. The tool provides critical information that allows WAHO and the Global Fund to respond quickly.

By increasing information sharing among regional health constituents, making

supply chain information easier to use and interpret, and enhancing local capacity for pharmaceutical supply chain management, the program has helped to reduce stock-outs, improve overall supply management, and provide uninterrupted access to HIV and AIDS commodities.

### HIV and AIDS Commodity Tracking Tool



National Stock Status, HIV/AIDS Pharmaceutical Commodities, Niger, Jan-Mar, 2014

Three products in blue with more than 100 months of stocks



Gap Analysis, HIV/AIDS Pharmaceutical Commodities, Togo, 2014

Funding requirement in orange and pledged funds in green



The Peace through Development II Project (PDEV II) assists communities in Niger, Chad and Burkina Faso to reduce their risk of instability and increase their resistance to violent extremism. PDEV II applies a holistic and innovative, community-led approach to address socioeconomic, political and cultural drivers of violent extremism, including empowering youth, increasing moderate voices, enhancing civil society capacity to address community issues, and strengthening local governance and citizenship.

Using improved governance and media, the project fosters an environment that makes it more difficult for terrorists to gain sponsorship, sanctuary and support from targeted communities. PDEV II directly addresses critical issues, such as weak governance and extremist narratives, by improving access to information and amplifying local voices for tolerance and peace.

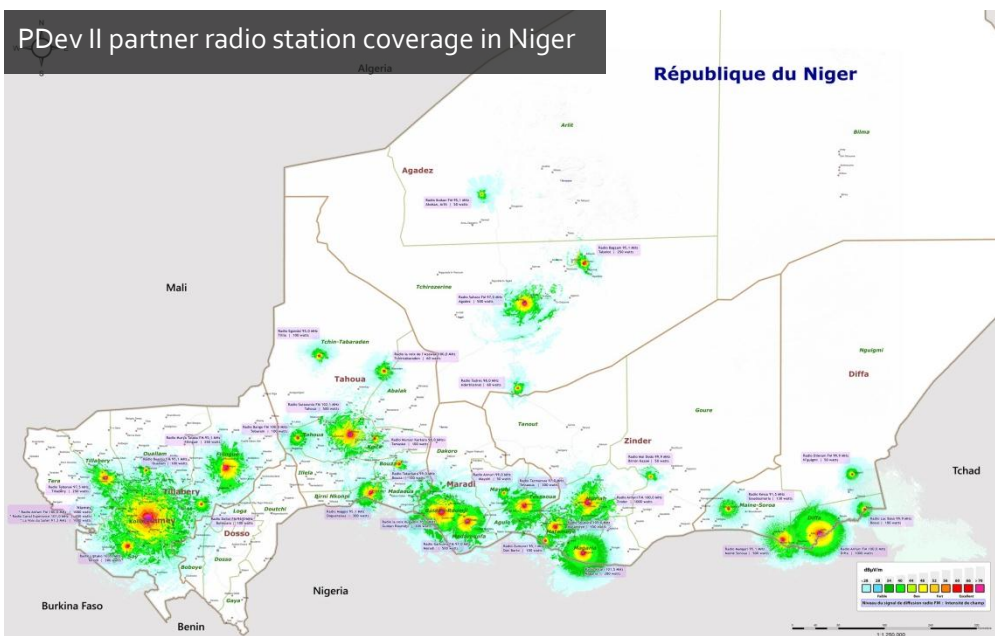
Across Burkina Faso, Chad and Niger, PDEV II works with a network of 44 partner radio stations to broadcast programming in five local languages. Thus far in 2014, the project has developed 260 hours of original programming that have been broadcast and re-broadcast a total of 2,376 hours, reaching 1.9 million people in communities at risk of violent extremism.

The project concentrates on addressing the concerns of young men and women who are at greatest risk of being targeted or recruited by violent extremist organizations. Consequently, PDEV II-supported youth talk shows, such as *Gwadaben Matassa* (Youth Boulevard) in Niger, use roundtable discussions, mini-dramas, testimonials, interviews and man-on-the-street conversations to engage local young people. The project has also launched an Interactive Voice Response system in Niger that, together with an SMS system, facilitates listener feedback and further engages youth.

## PDEV II addresses socio-economic, political and cultural drivers of violent extremism in at-risk youths

Building local radio partnerships to counter the appeal of extremist movements in the Sahel

PDev II partner radio station coverage in Niger





## Water, sanitation and hygiene activities promote sustainable service delivery

Introducing innovative and low-cost water/sanitation technologies to rural communities

Insufficient and inadequate access to water and sanitation services has enormous health, economic and social consequences. Diarrheal disease is more common when there is a shortage of clean water for drinking, cooking and cleaning. According to the World Health Organization, diarrhea is a major killer amongst the poor, especially in developing countries, and in Africa, is responsible for as much as 7.7% of all deaths. Children in developing countries remain especially at risk. In addressing these issues, USAID/West Africa's water, sanitation and hygiene (WASH) activities focus on expanding access, instilling behavior change in hygiene, promoting sustainable service delivery, fostering synergies, and building capacity.

The mission accelerates access to improved water supply and sanitation services. Working in rural and peri-urban areas, its activities improve the sustainability of WASH service delivery and scale up best practices across the region. Sustainability of interventions poses one of the biggest challenges to

providing water supply and sanitation in rural areas. From its assessment, USAID and its partners discovered that less than 50% of existing water pumps were working in many areas of intervention. Water quality at access points was highly questionable and unverifiable, given limited laboratory capacity to conduct proper water quality analysis in remote areas. In Burkina Faso and Ghana, the mission is piloting activities that address water quality and laboratory capacity needs. Best practices and lessons learned are disseminated and scaled up across the region.

Building synergies between WASH activities and its broader development portfolio, the mission also advances food security, promotes sustainable resource management, and reduces vulnerability to climate change. USAID works with a consortium of partners from non-governmental organizations to introduce low-cost water technologies and hygienic sanitation behaviors to rural communities. Innovative technologies such as rope

pumps and improved techniques for well drilling were introduced through replicable models that seek to improve community access to WASH coverage.

To address capacity building needs, three regional universities were selected as focal points for WASH training: the International Institute for Water and Environmental Engineering in Burkina Faso, the University of Niamey, Niger, and the University for Development Studies in Tamale, Ghana. Ultimately, USAID's WASH activities seek to develop the capacity of local, regional and pan-African organizations and academic institutions to replicate its approaches and models for sustainable service delivery.

Through USAID WASH initiatives, 173,600 people now have improved access to drinking water and 265,600 have improved access to sanitation services. The program has also leveraged parallel WASH investments from other donors.



# Partnership and Funding Opportunities

## Development Innovation Accelerator (DIA)



A new collaboration mechanism, DIA seeks to accelerate USAID's ability to discover, test and scale up game-changing innovations with partners. Searching for opportunities to co-create, co-design, co-invest and collaborate in basic and applied research and development for STIP, DIA invites organizations and companies to participate in developing innovations and technologies that further our development goals. For more information, see

[www.usaid.gov/GlobalDevLab/partner](http://www.usaid.gov/GlobalDevLab/partner).

## Development Innovation Ventures (DIV)



An open competition, DIV supports breakthrough solutions to the world's most intractable development challenges—interventions that could change millions of lives at a fraction of the usual cost. Bold development ideas are eligible from any sector and any country in which USAID operates. DIV looks for compelling new development solutions in a year-round competition, rigorously tests them, and helps scale those that are proven successful to reach millions of beneficiaries around the world. Applications accepted on a rolling basis. See [www.usaid.gov/div](http://www.usaid.gov/div).

## Global Development Alliance (GDA)



Through GDAs, USAID seeks to collaborate with the private sector to increase our development impact. Potential alliance partners are expected to bring significant new resources, ideas, technologies, and/or other partners to development activities. Successful proposals will mobilize private sector contributions, both cash and in-kind resources, on at least a one-to-one basis. For more information, see [www.usaid.gov/gda](http://www.usaid.gov/gda).

## Research and Innovation Fellowships (RIFs)



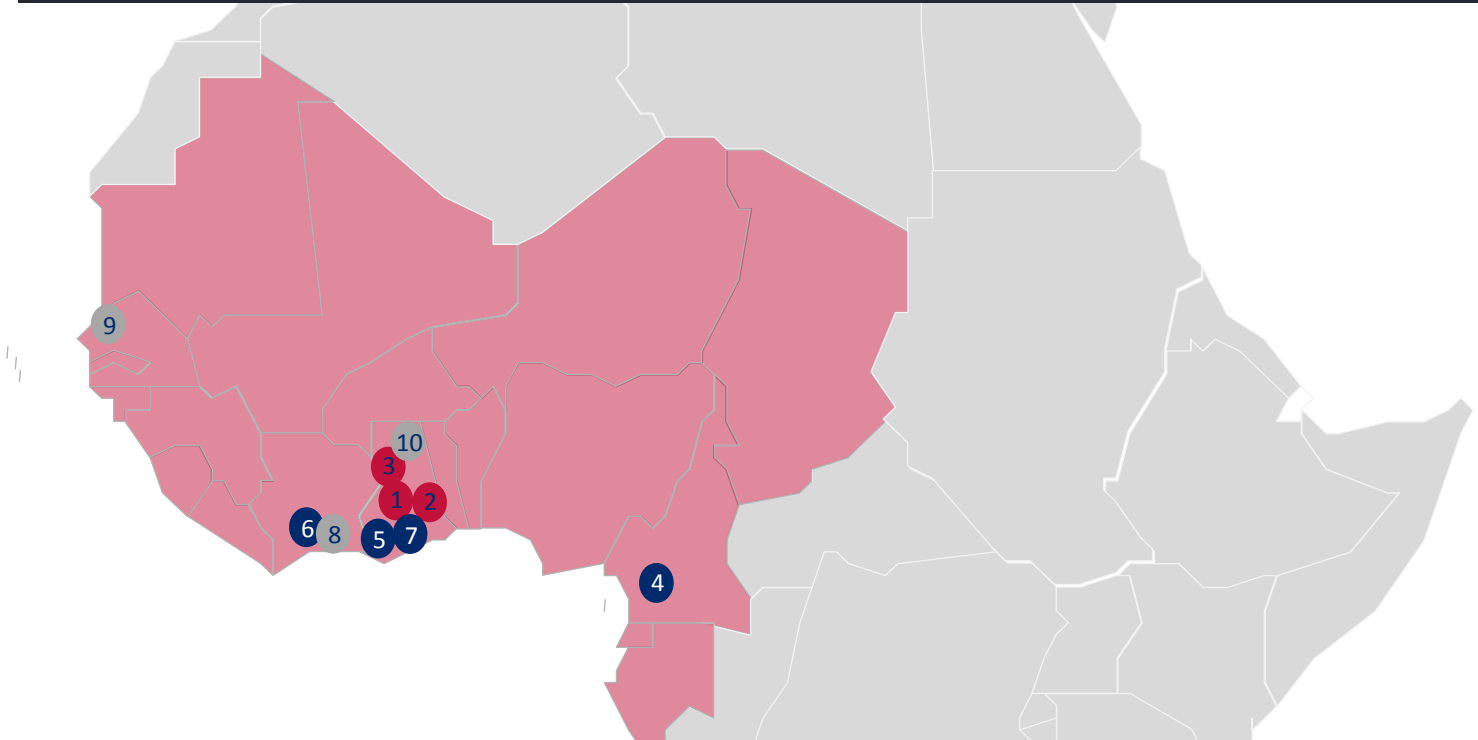
The USAID RIFs aim to build a sustainable model for knowledge exchange by connecting bright American minds with key in-country organizations to collaboratively apply science, technology and innovation to complex development challenges. The Fellowships offer unique opportunities for Fellows to provide critical research and technical expertise to exciting, progressive projects and initiatives with tangible and finite goals. See [www.usaid.gov/RIFellowships](http://www.usaid.gov/RIFellowships).

## Grand Challenges for Development (GCD)



Under the GCD initiative, USAID focuses on defining problems, identifying constraints and providing evidence-based analysis. Addressing these challenges will require the creation and support of self-perpetuating systems, rather than one-off inventions or interventions. Five Grand Challenges have been launched. See [www.usaid.gov/grandchallenges](http://www.usaid.gov/grandchallenges).

# Upcoming STIP Activities and Events, West Africa, Q4-CY2014



## October

- 1 Ebola Preparedness Workshop, Ghana – Help host-country governments to develop their Ebola Preparedness Plans
- 2 Water and Sanitation Project Partners Meeting, Ghana – Engage in project workplanning
- 3 Launch of the Africa Center of Excellence, Ghana – Inaugurate USAID/West Africa’s new platform for knowledge management

## November

- 4 Water and Sanitation for Africa Forum, Cameroon – Review efforts to (i) make available innovative, appropriate and efficient technologies to the continent and (ii) mobilize massive and innovative financing to provide access to water and sanitation
- 5 YALI Fellows West Africa Regional Board Meeting, Ghana – Plan upcoming regional YALI activities
- 6 Launch of AgirPF, Cote d’Ivoire – regional family planning service delivery project in support of the Ouagadougou Partnership to reposition family planning in Francophone West Africa
- 7 Private Sector Engagement and Partnership Training, Ghana – Provide Agency guidance on ways to partner effectively with the private sector

## December

- 8 ECOWAS Biotechnology Ministerial Conference, Côte d’Ivoire – Discuss implementation status of Biotechnology Action Plan
- 9 CORAF Board Meeting, Senegal – Review organizational status of research activities
- 10 Integrating Mobile Solutions into Development Projects Training, Ghana – Introduce Agency guidance on ways to integrate technology solutions into project design and implementation that improves the digital ecosystem



## OUR MISSION

---

WE PARTNER TO END  
EXTREME POVERTY AND  
PROMOTE RESILIENT,  
DEMOCRATIC SOCIETIES  
WHILE ADVANCING OUR  
SECURITY AND PROSPERITY



## USAID/West Africa provides an important regional platform to promote more effective development interventions.

West Africa's tremendous resources—human, agricultural and mineral—are constrained by political instability, poor governance, environmental degradation, disease, extreme poverty, and lack of private investment opportunities. To combat these challenges, USAID's West Africa Regional mission, located in Accra, Ghana, implements innovative

regional activities to address trans-boundary issues, as well as activities in countries where there is no USAID mission.

This quarterly newsletter highlights USAID efforts in West Africa to increase the application of science, technology, innovation and partnerships in its programming.

[www.usaid.gov/west-africa-regional](http://www.usaid.gov/west-africa-regional)

## United States Agency for International Development

West Africa Regional Mission  
No. 24 Fourth Circular Rd., Cantonments  
P.O. Box 1630  
Accra, Ghana