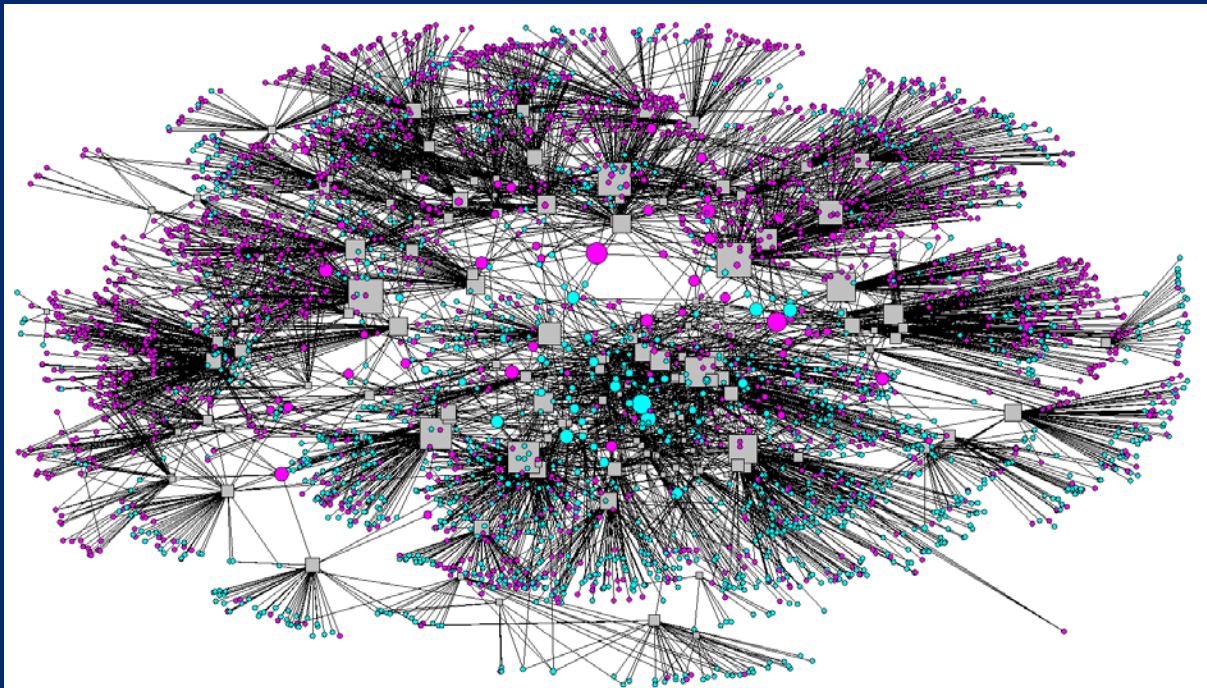




# SUSTAINABLE FISHERIES MANAGEMENT PROJECT (SFMP)

## Stakeholder Participation and Social Network Baseline and Year 2 Report



MAY 2017



This publication is available electronically on the Coastal Resources Center's website at [http://www.crc.uri.edu/projects\\_page/ghanasfmp/](http://www.crc.uri.edu/projects_page/ghanasfmp/)

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**Cover:** The SFMP stakeholder network as of September 2016. Grey boxes: SFMP events. Pink circles: women; blue circles: men. Circle and box size based upon a measure of "betweenness"...how well the individual or event is able to link to different parts of the stakeholder network.

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## **ACRONYMS**

CiviCRM	Civil [Society] Constituency Relationship Management
GITA	Ghana Industrial Trawlers Association
ICFG	USAID Integrated Coastal and Fisheries Governance Project
IR	Intermediate Result
MSME	Micro, Small and Medium-scale Enterprises
NAFPTA	National Fish Processors and Traders Association
SMFP	USAID Ghana Sustainable Fisheries Management Project
UCC	University of Cape Coast
URI	University of Rhode Island
USAID	U.S. Agency for International Development

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## INTRODUCTION

Engaging stakeholders, building social capital and expanding the political constituency for fisheries management are core strategies toward meeting the USAID/Ghana Sustainable Fisheries Project goal to “Rebuild targeted fish stocks through adoption of sustainable practices and exploitation levels.”

Since the very beginning, SMFP initiated campaigns that build the constituency for change that captures the support of high-level decision makers and politicians as well as grass-roots fishermen, fishmongers and processors. Two of the main intermediate results (IRs) of the project are aimed at expanding their engagement.

IR 3 “constituencies and political will built” is designed to insure that the public is aware of the challenges ahead and becomes supportive of short-term restrictions to reverse the diminishing returns on investment in the fisheries sector.

IR 4 emphasizes local actions to test out small scale fisheries actions as well as complimentary livelihood development through improvements to the value chain from boat to consumer.

Stakeholder support and engagement requires building and mobilizing social capital.

Social capital refers to the network of relationships we have: good will, mutual aid, shared language, shared norms of behavior, trust, sense of mutual obligation where people gain mutual benefits by being a member of a network. Social Capital refers to the benefits one obtains from their position in a network, NOT their personal attributes or capabilities. (Huysman and Wulf, 2005)

Fisheries management and marine protected areas require supportive social networks to be successful. Johnstone (2009) points out that:

Social capital can be used by people to do things collectively for the benefit of everyone. It is commonly associated with the ties and bonds that help communities to co-operate and manage a natural resource used communally. These include the connections and networks that build traditions and customs that, over many years, can be used by fishing communities to control use and access to a fishery.

Information flow and exchange are important functions of a network created to advance fisheries policy in Ghana.

Leaders have a special responsibility to take on the challenge of clarifying what knowledge is needed to address an issue right now. They also need to play a role in building social capacity to address similar problems at different scales and locations through knowledge accumulation, updating, and dissemination.” (Robadue *et al.*, 2010.)

All of the IRs in the USAID SFMP project incorporates a wide variety of activities aimed at brooding the network needed for good governance of fishing and fish marketing. Informing and being informed by stakeholders in the fishing enterprise, listening, discussing and building consensus on policy, scientific information about fisheries and the fishing value chain are all facets of building an informed, active constituency. IR1 directly focuses on policy formulation and implementation, including engaging fishers and others in citizen watchdog groups. IR2 engages the Science and Technical Working Group, the University of Cape Coast and SFMP implementing partners to gather fisheries data and local ecological knowledge, assess reports and advise the Fisheries Commission, as well as creates a second environmental data hub to foster learning and capacity in creating and utilizing geographic

information in districts. IR5 addresses the cross-cutting issue of gender, IR6 builds private-public partnerships, and IR7 focuses on strengthening government and civil society organizations to better engage in fisheries management and improve fisheries value chains.

The SFMP is interested not only in the broad patterns of stakeholder engagement but also in maintaining contact with all of the individuals and organizations that participate in its activity. The SFMP Monitoring and Evaluation plan gathers information on several indicators that are relevant to this challenge. Indicator 2 tracks the number of direct beneficiaries and their gender, Indicator 11 tracks individuals applying new management practices and Indicator 12 tracks the number of micro, small and medium enterprises receiving business services, Indicator 17 refers to the people receiving training in natural resources management. These numbers are reported in aggregate, however the data used to create them is taken in part from attendance sheets at the many meetings and events held by the SFMP staff and the eight implementing partners. These lists have also been used to compile a large contact and relationships data base that includes participant's gender and contact information.

This report draws upon the event participation and contact information to trace the growth of stakeholder engagement related to SFMP activities. In addition to the cumulative number of individuals and encounters, the data has been analyzed to determine how many new individuals—men and women—are becoming involved over time. In addition, we explore whether it is possible to document shifts over time in the levels of engagement of women in policy-related events compared to livelihood related training and meetings, to see if elements of success in implementing the SFMP gender strategy for increasing women's engagement in policy can be detected. Finally, we decided to utilize approaches employed in social network analysis to draw additional insights out of this routine information in terms of actors who are more central or well-placed to foster or block information exchange. Some results of this exercise are also presented here.

## **APPROACH**

### *Contact management information*

The SFMP compiled participation information on 58 events of various types held during Project Year 1 (October, 2014 through September, 2015) and an additional 92 events during Project Year 2. These events involved 3,574 unique individuals attending project meetings, public sessions on fisheries policy, small business management, natural resources management and fisheries value chain training, and anti-child labor activities, and public-private partnership efforts. Names, gender and contact information were gleaned from the attendance sheets submitted by event leaders and implementing partners and compiled using an open-source contact and event management software system called CiviCRM (<https://civCRM.org/>). The SFMP also recorded the events each individual participated in using a function in CiviCRM called "groups". Contact information such as telephone numbers were validated and where available other attributes of individuals such as email and physical address and organizational membership were noted. This information is not shared publicly by the SFMP. However, summary reports of most of these events, including participant lists, are routinely published online. Participant lists are also routinely submitted to USAID's Trainet system. Unique identifiers are assigned to each individual, to help distinguish among people with similar names, with the syntax LastName\_FirstInitial. In this report, names or identifiers are not presented except for the 25 individuals in Figure 23 and Appendix 3, who are all well-know public figures or project staff, to demonstration how the network analysis can be used to identify leaders and communicators.



### *Participation in SFMP events*

This basic information was extracted from CiviCRM to create the equivalent of a very large meeting attendance sheet using Excel consisting of 150 columns for the 58 events in project Year 1 (October, 2014- September, 2015) and the 92 events in Year 2 (October, 2015- September, 2016)., and 4020 rows for the individuals who have participated in one or more events during project Year 1 or 2. Columns of information on the first and last names, the unique identifier (LastName\_FirstInitial) and the gender of each individual appear on the far left of the sheet. When gender was not recorded on a sign-in sheet, it was inferred from the full name of the individual when entered in CiviCRM. Four additional panels of information were created to the right of the attendance table in order to answer some basic questions about patterns of stakeholder involvement in the project.

Two tables were created to determine whether the participant in a given event was male or female. Separate tables were used to do this, with totals summed at the bottom to create graphics of attendance for each event as well as cumulative attendance in all events for each year. For the women's participation table, a formula was placed in each cell that checked the attendance table to determine whether the individual attended that particular event, and also checked the gender designation column to determine if the participant is also female. The men's participation table performed the same operation. The individual and cumulative sums by gender were then used to create the graphics shown in the Findings section below.

USAID and the SFMP are interested in how many new individuals the project is encountering, as well as how many times an individual is involved in different project events overall. Two additional tables were created based on the gender table that note the first time the individual participates, and suppresses information on all subsequent engagements. Event and cumulative summaries were also computed. With this simple framework, some basic questions can be answered about stakeholder engagement for Year 1 and Year 2 separately, as well as in combined form. These results are presented in the next section.

### *Social network mapping*

In addition to data summaries and graphics showing participation levels over time, information from participation in events can be extracted to visualize stakeholder contacts in the form of a social network that is growing in size as well as in terms of density of relationships over time. In addition, we can identify individuals who are relatively more connected either as organization leaders or through their relatively strong contact across different groups of stakeholders as a result of participation in multiple events. One approach to this is to ask each stakeholder periodically over time who they know or interact with and match this with known encounters with SFMP activities. This would be a rich source of understanding of the social relationships and social capital being built by the SFMP but it is time consuming and expensive to collect, and governed by research protocols for human subjects.

Fortunately, we can “infer or predict ties based on belonging to the same groups or attending the same event.” (Borgatti, Everett, and Johnson, 2013, p. 231) using the same readily available information recorded during the participation of individuals in SFMP project events and used to generate the participation tables and graphics described above. For this report, the emphasis is placed on visualizations of the growing SFMP network and using some simple indicators of tie-strength and centrality to identify patterns of leadership and communication, as well as to explore the potential use of this approach in building a larger constituency for fisheries management.

## **FINDINGS**

### **Overall patterns and trends in stakeholder engagement in Year 1**

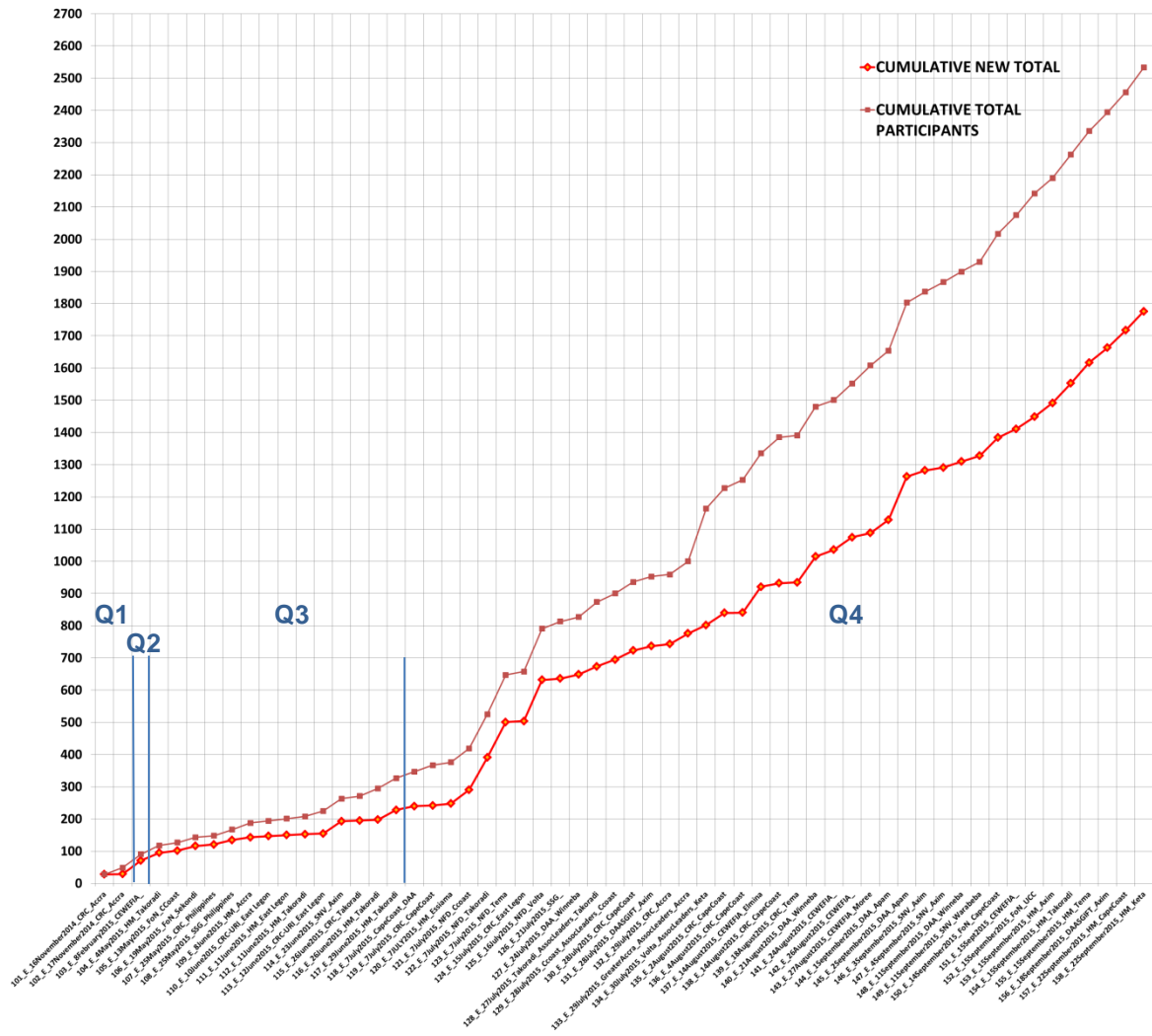
#### ***Stakeholder engagement in events***

We were able to document 58 events of all types in Year 1. A cumulative total of 2,533 participants in all events involved 1,776 unique individuals. The cumulative number of participants, and the cumulative number of newly involved participants is shown in Figure 1. The first several months of project start up consisted of a number of relatively small events as implementing partners began receiving their first sub-contracts and organizing initial meetings with stakeholders. By July 2015 the first national fisheries dialogue meetings were held in each region, accounting for a significant boost in stakeholder involvement.

Encouraging the engagement of both men and women in policy discussions, capacity building and livelihood projects is an important cross-cutting objective of the SFMP. Figure 2 illustrates the cumulative engagement of men and women in SFMP events, and Figure 3 highlights the gender of new participants. The trends for cumulative involvement is 1,370 men (54.1%) and 1,162 women (45.9%), including project staff and facilitators. The number of unique individuals which the SFMP reached through these events was 1,776, including 929 men (52.3%) and 847 (47.7%) women.

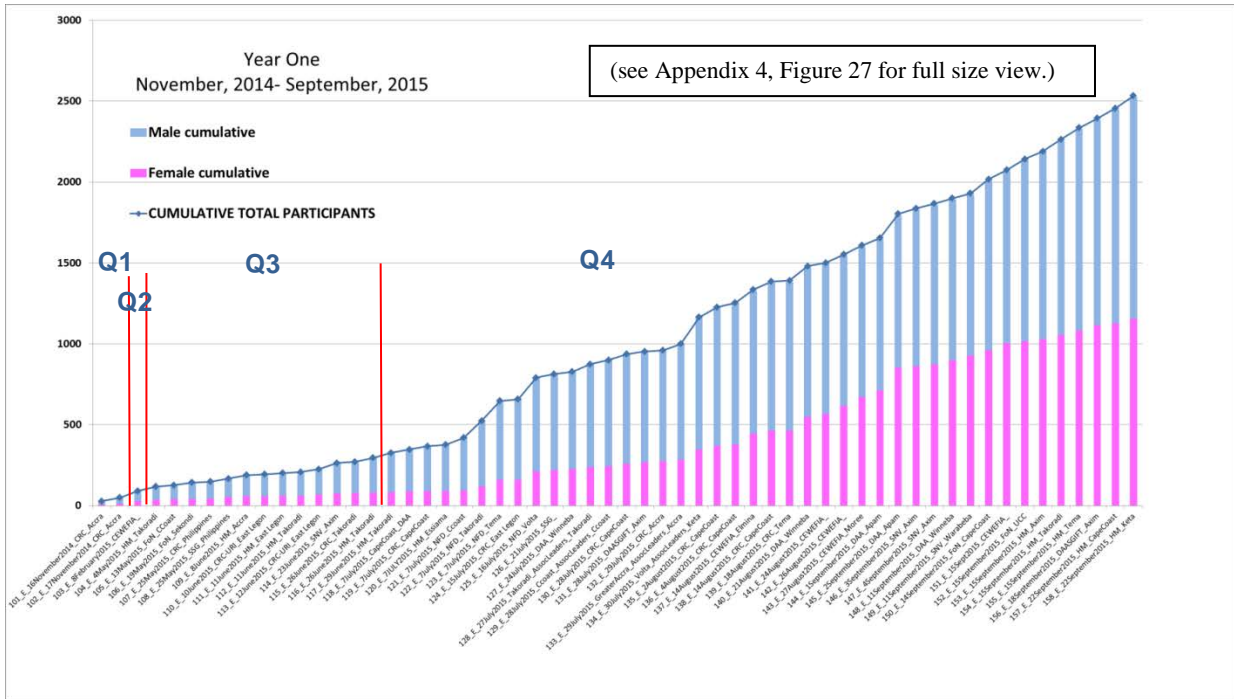
The cumulative proportion of women as new individuals involved with the SFMP has remained less than 50 % since nearly the beginning of the project, passing above 50% only in the last month of the project Year. Figure 4 shows the total involvement of men and women in each Year 1 event, and Figure 5 indicates how many new men and women each event was able to involve. Figure 6 indicates that new women involved in the SFMP's activities remained below 40% until the last quarter when the proportion reached 47.7 %. Finally, Figure 7 shows the same overall cumulative pattern and Figure 8 provides proportional information per event. The gaps in information for two events in Figure 8 simply indicates that no new participants were involved in those activities.

On the other hand, the cumulative portion of stakeholders who have attended more than one event has remained steady at about 30 per cent of the total during the later part of Year 1.



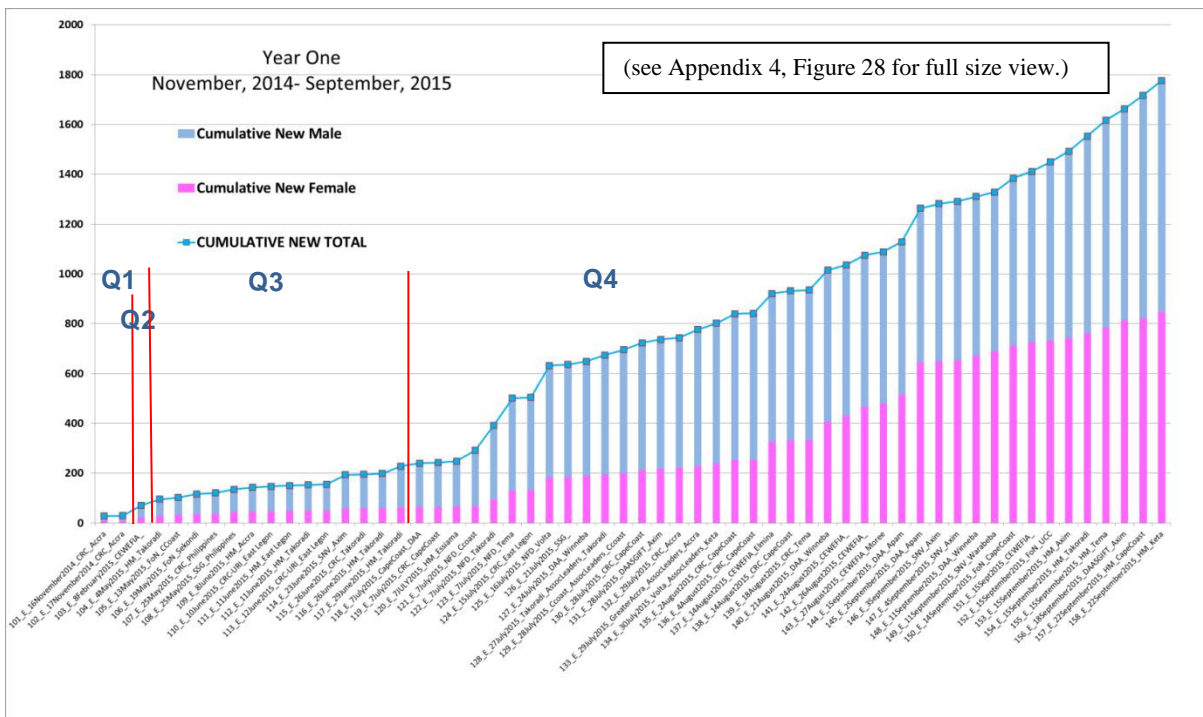
**Figure 1 Cumulative and Unique number of stakeholders engaged in SFMP events, November, 2014 through September 2015**

Note: By July 2015, the first national fisheries dialogue meetings were held in each region, accounting for a significant boost in stakeholder involvement. A cumulative total of 2,533 participants in all events involved 1,776 unique individuals. The majority of events occurred in the third and fourth quarters of the first year after a six month start-up period.



**Figure 2 Cumulative number of stakeholders engaged in SFMP events, November, 2014 through September 2015, by gender.**

The trends for cumulative involvement through Year 1 is 1,370 men (54.1%) and 1,162 women (45.9%), including project staff and facilitators.



**Figure 3 Cumulative number of new stakeholders engaged in SFMP events, November, 2014 through September 2015, by gender.**

The cumulative proportion of women as new individuals involved with the SFMP has been a few percentage points less than 50 % since nearly the beginning of the project. The number of unique individuals which the SFMP reached through these events was 1,776, including 929 men (52.3%) and 847 (47.7%) women.

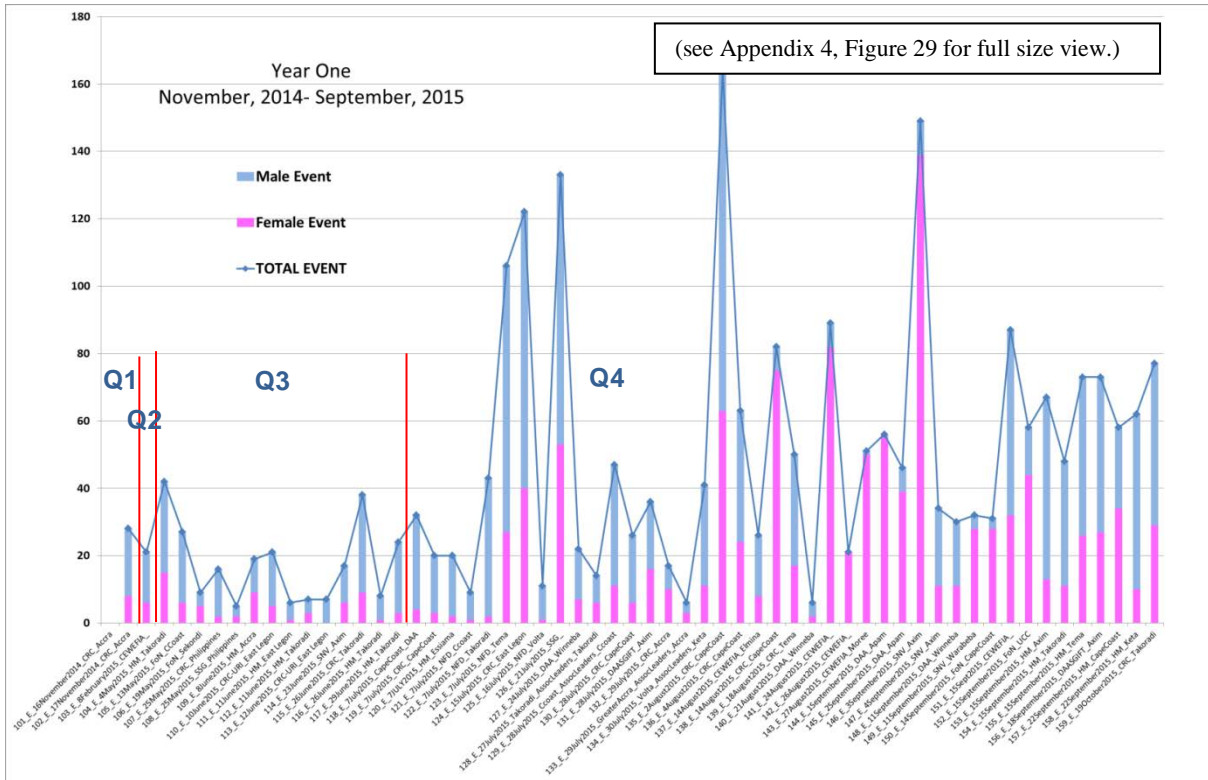


Figure 4 Number of men and women participating in each Year 1 event

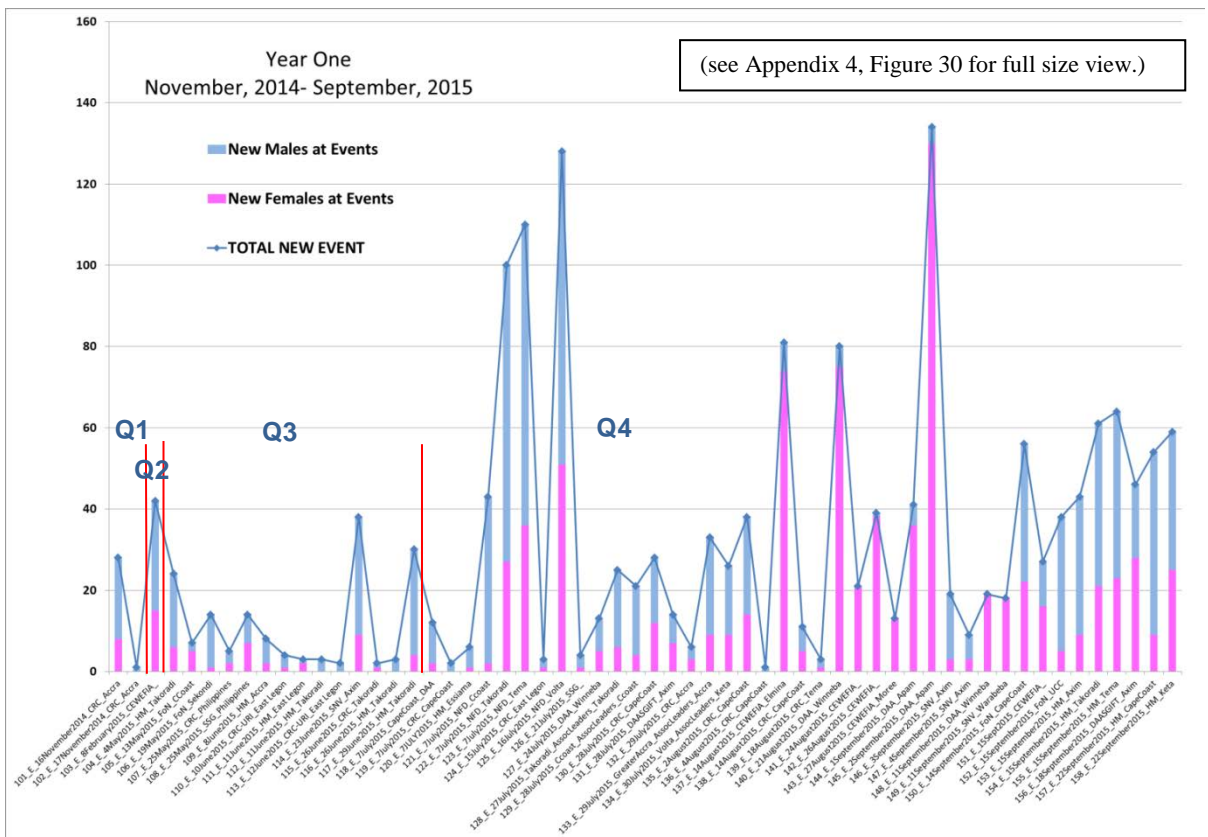
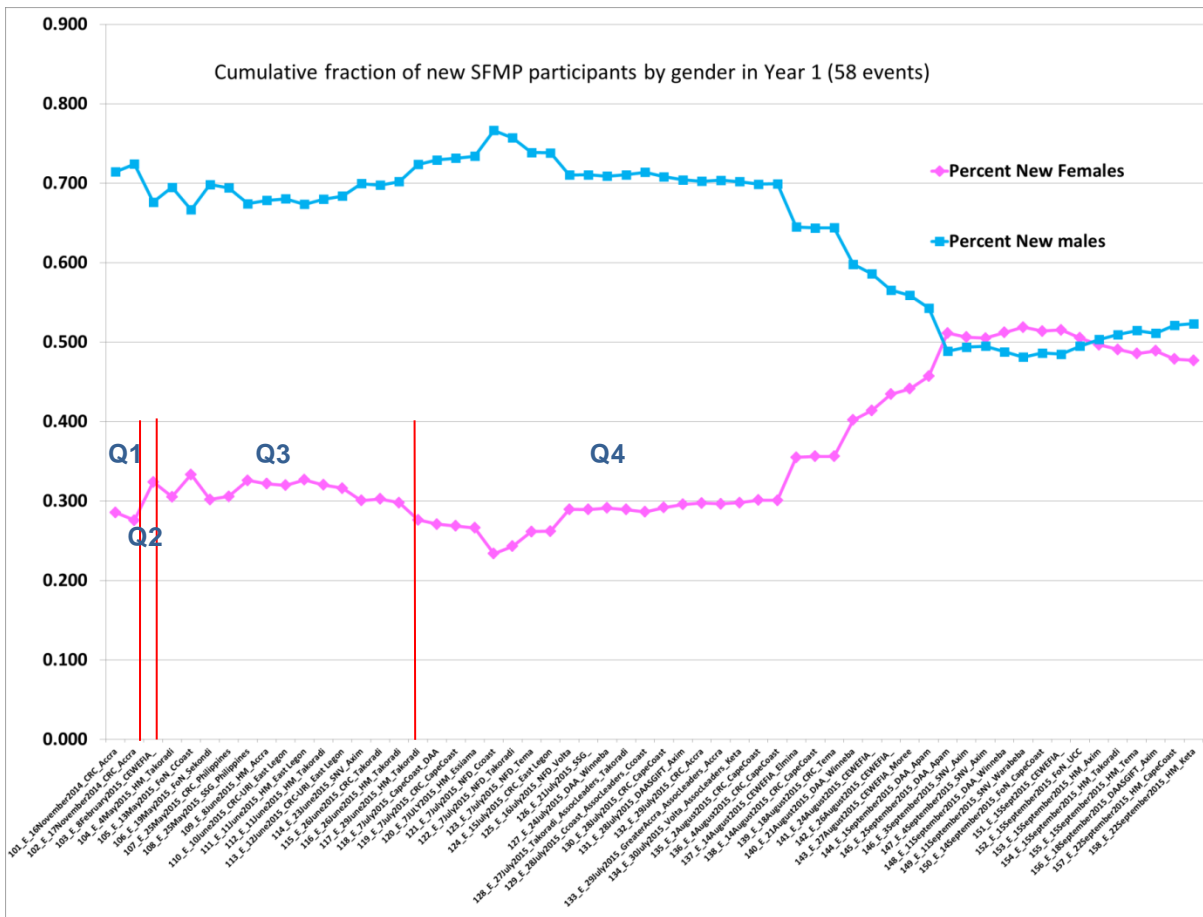
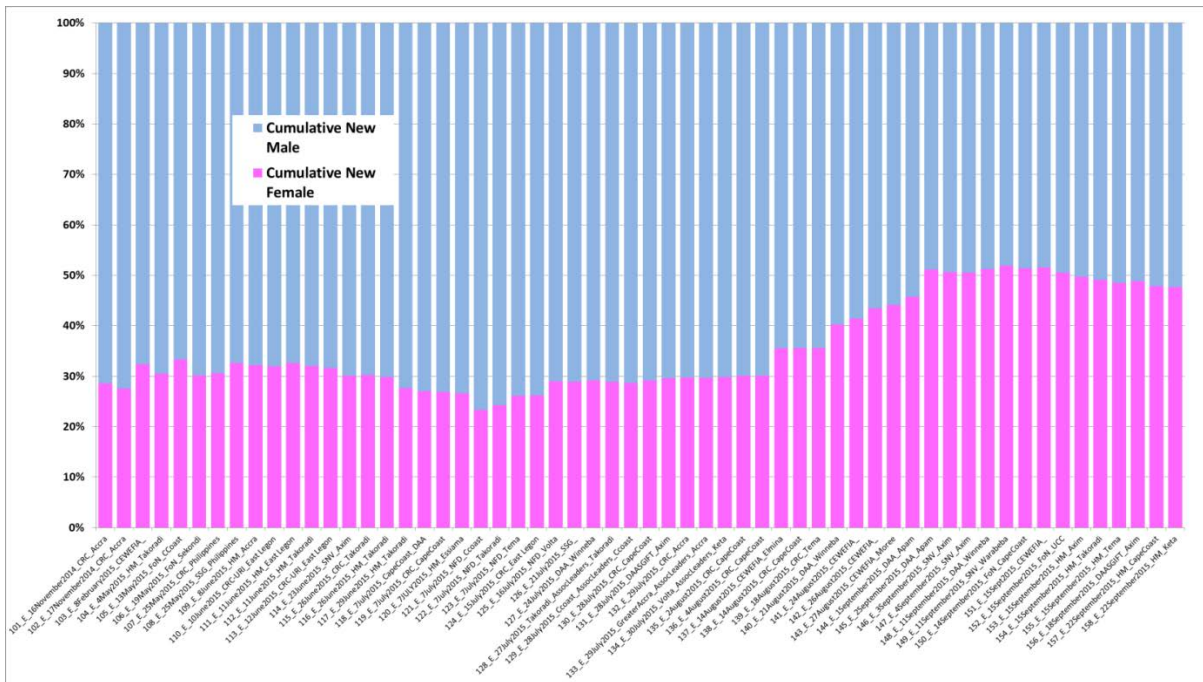


Figure 5 Number of new men and women participating in each Year 1 event



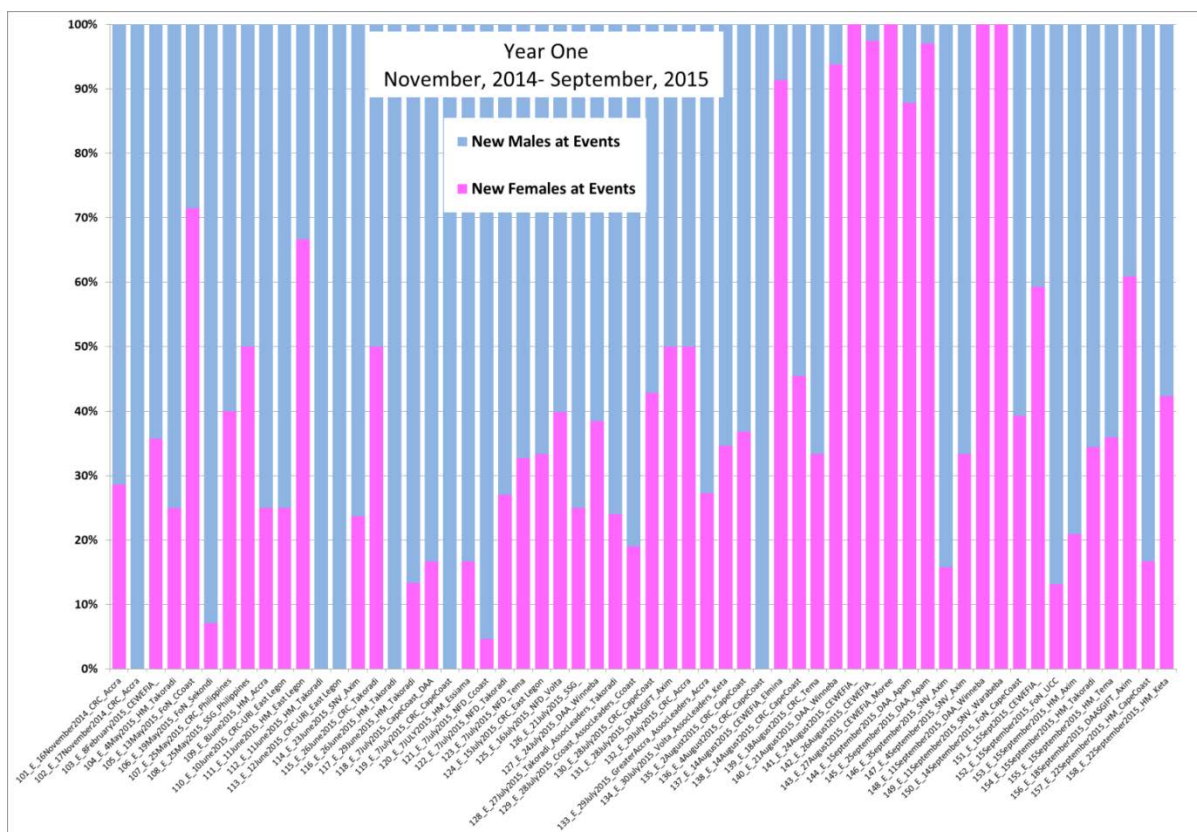
**Figure 6 Cumulative fraction of new SFMP participants by gender in Year 1 (58 events).**

Note: New women involved in the SFMP’s activities remained below 40% until the last quarter when the proportion reached 47.7 %



**Figure 7 Cumulative proportion of new men and women participating in Year 1 SFMP events**

Note: The proportion of new women involved in the SFMP’s activities remained below 40% until the last quarter, briefly reaching 50 % of new stakeholders in September, 2015 but ending the year at 47.7%.



**Figure 8 Proportion of men and women participating in each Year 1 event**

**Stakeholder engagement and constituency building: the SFMP social network**

A key objective of both the SFMP and its predecessor Integrated Coastal and Fisheries Governance (ICFG) project is helping to build a supportive constituency for improved governance of Ghana’s fisheries resources, as well as spur behavior change toward improved practices in fisheries value chains. For example, the ICFG was known locally as “Hen Mpoano” or “Our Coast”, and had created a broad and deep constituency and active social network supporting its work in the Western Region. Among the lessons it learned:

Knowledge of social and ecological dynamics must develop as a collaborative effort and become part of the organizational and institutional structures. For example, by focusing on gender issues, the team developed a more complete understanding of the dynamic role of women in the fisheries value chain. (Page, 2013, p. 3)

The Hen Mpoano Initiative has developed a brand, social identity and network so that there is now a growing cadre of Ghanaians with the capacities and the commitment to carry forward the values and Initiatives it has put into motion. (Page, 2013, p. 4)

The ICFG did not track or attempt to visualize its stakeholder engagement in depth using contact management databases or software. This oversight is one of the motivations in the SFMP for utilizing project management information to accomplish this.

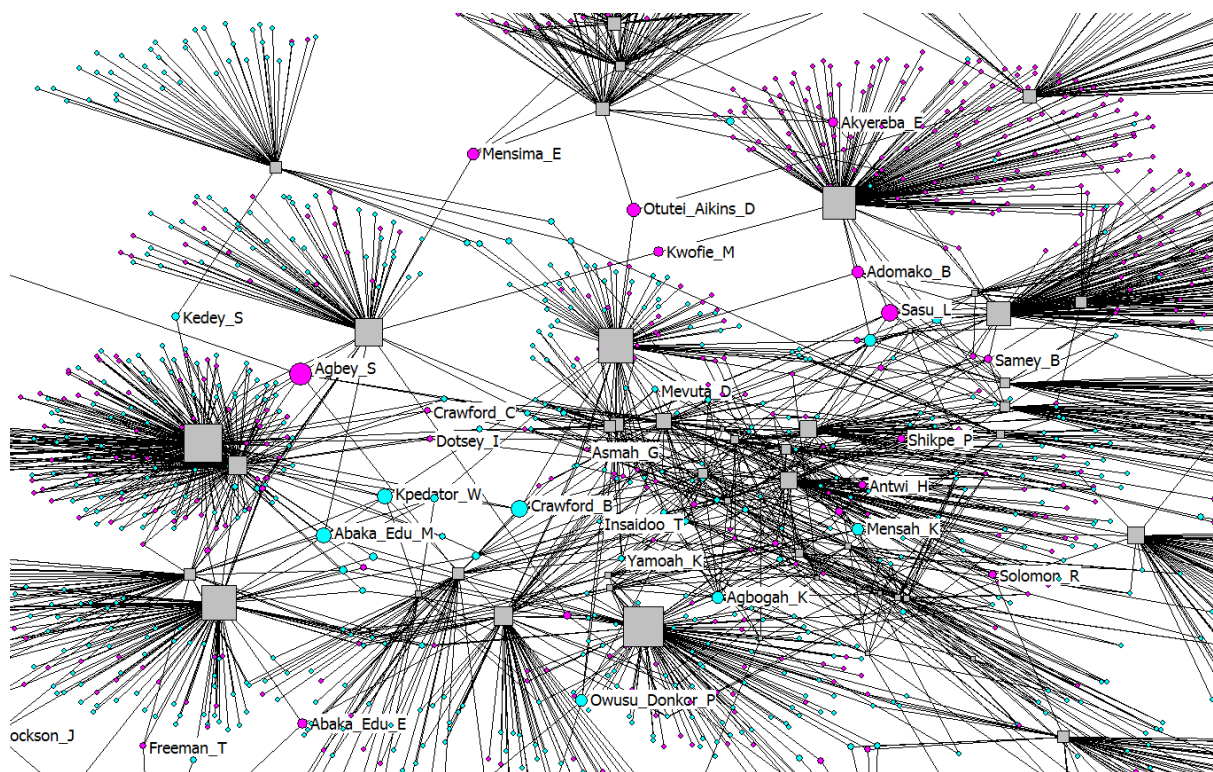
In addition to the data graphs shown in Figures 1-8, we can use an affiliation network approach to portray additional patterns and characteristics of the stakeholder network that is emerging around the efforts of the SFMP to support the Ministry of Fisheries and Aquaculture Development and the Fisheries Commission formulate and implement key policies.





Figure 10 provides a visualization for Year 1 events based on calculations made of the entire Year 1 and Year 2 network using UCINET’s centrality routines. Detailed information is provided in Appendix 2. These variables can be interpreted as indicators of the relative importance or influence of the event or individual. Individuals who have higher centrality contribute to network cohesiveness. However, the position of individuals within a network also matters. Those with only a few ties but who are the bridge between groups that normally have little interaction with each other will have high “betweenness” scores. A network of many individuals with “weak ties” created in part by mixing together at training, policy or public events will have a greater cohesiveness fostered by the flow of information and influence. In Figure 10, there is a dense core of individuals who are particularly well placed to have a high information flow and know many members of the growing SFMP network. Some of the individuals have high centrality scores but many others do not. Several events with high betweenness scores are located at the core. Surrounding this core are many events that have served to bring in a great many individuals for the first time. Some of these new clusters are largely women, particularly livelihood oriented training and outreach, others are mixed gender groups. Some individuals appear to link together individual events.

This can be seen more clearly in Figure 11, which depicts the center of the network. There is no single highly dominant individual, rather the center is a combination of project and organizational leaders and activity participants. Project leader Dr. Brian Crawford, not surprisingly, is located near the very center of the network graphic. However other project leaders, for example Sarah Agbey, an expert at SNV, Thomas Insaiddoo of the Fisheries Commission, Kofi Agbogah, Director of Hen Mpoano, Kyei Yamoah and Donkris Mevuta who lead Friends of the Nation, and Lydia Sasu, Director of Development Action Association were also centrally positioned and able to reach nearly all the participants in the project within two steps.



**Figure 11 View of the inner core of the SFMP network, Year 1**

Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.

Project staff, organization directors and expert stakeholders work across events and clusters of project participants, sharing information, conducting training, and even coordinating amongst themselves on a regular basis. For example, the partners implementing livelihood projects and MSME capacity building began to meet periodically.

Activities in Year 1 took place in only a few fish landing sites and reached only a small fraction of the more than 100,000 fishers and fish processors working in artisanal fishing. The project also engaged with a larger proportion of men than women. By tracking its constituency with CiviCRM the SFMP and the Fisheries Commission can be far more aware of the groups and coastal locations that it is not yet reaching, as well as to identify and encourage stakeholders to convey the messages emerging from SFMP efforts to their colleagues, co-workers and organizations.

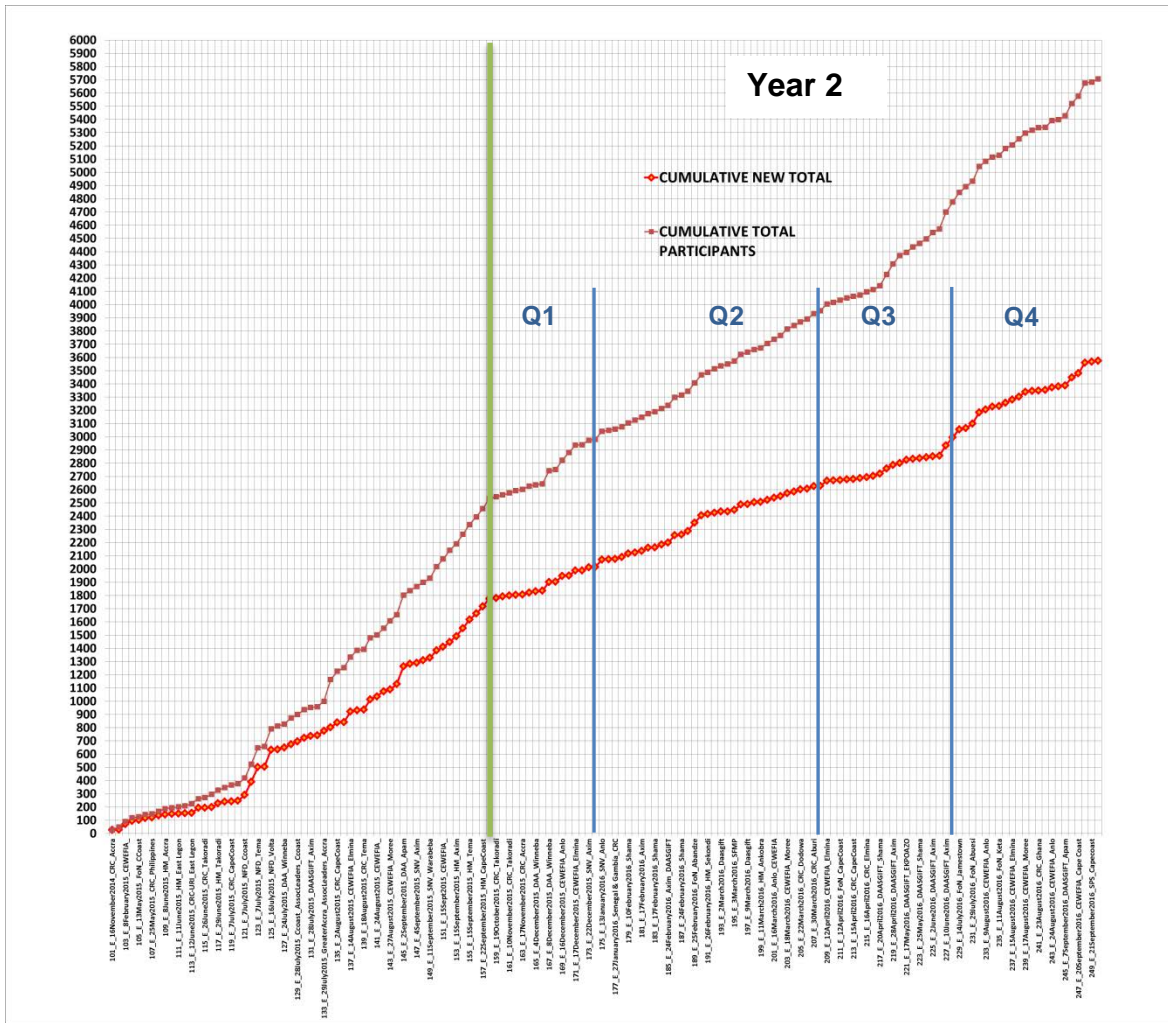
## **Overall patterns and trends in stakeholder engagement in Year 2.**

### ***Stakeholder engagement in events***

We were able to document 92 events of all types in Year 2. By the end of the second year of the SFMP, a cumulative total of 5,707 participants in all events--- more than double Year 1--- and involved 3,574 unique individuals, twice the level of Year 1. The cumulative number of participants, and the cumulative number of newly involved participants is shown in Figure 12. The first several months of project start up consisted of a number of relatively small events as implementing partners began receiving their first sub-contracts and organizing initial meetings with stakeholders.

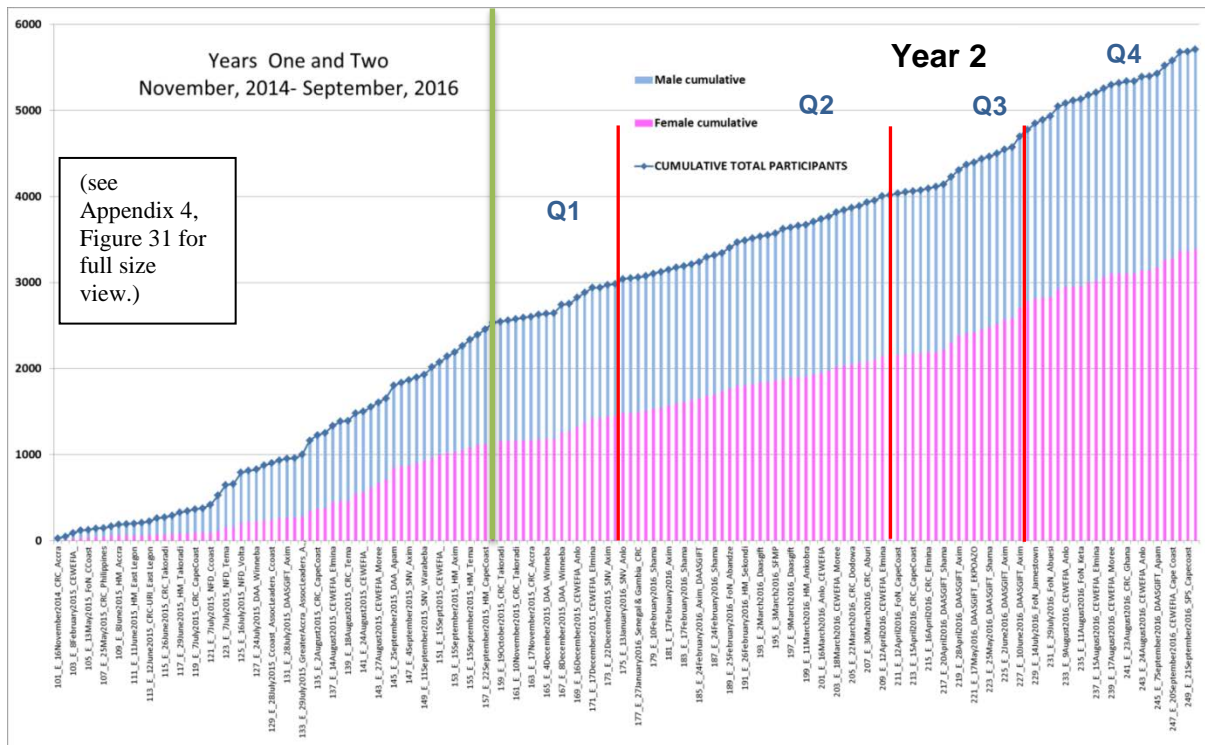
Encouraging the engagement of both men and women in policy discussions, capacity building and livelihood projects is an important cross-cutting objective of the SFMP. Figure 13 illustrates the cumulative engagement of men and women in SFMP events, and Figure 14 highlights the gender of new participants. The trends for cumulative involvement is 2,304 men (40.4%) and 3,403 women (59.6%), including project staff and facilitators. The number of unique individuals which the SFMP reached through these events by the end of Year 2 was 3574, including 1,472 men (41.2%) and 2,102 (58.8%) women, as shown in Figure 14. Figure 15 shows the proportion of men and women in each of the 150 events, and Figure 16 shows the proportions of new men and women participants in each event in Years 1 and 2.

The cumulative proportion of women as new individuals involved with the SFMP increased by 150% during the second year, passing above 50% at the end of calendar year 2015 and steadily growing to 58.8% by the close of Year 2. This cumulative trend for engaging new men and women is shown in Figure 14. An alternate visualization of this accumulation is shown in Figure 15 while Figure 16 provides proportional information per event. The gap in information for one of the events in Year 2 simply indicates that no new participants were involved in that activity.



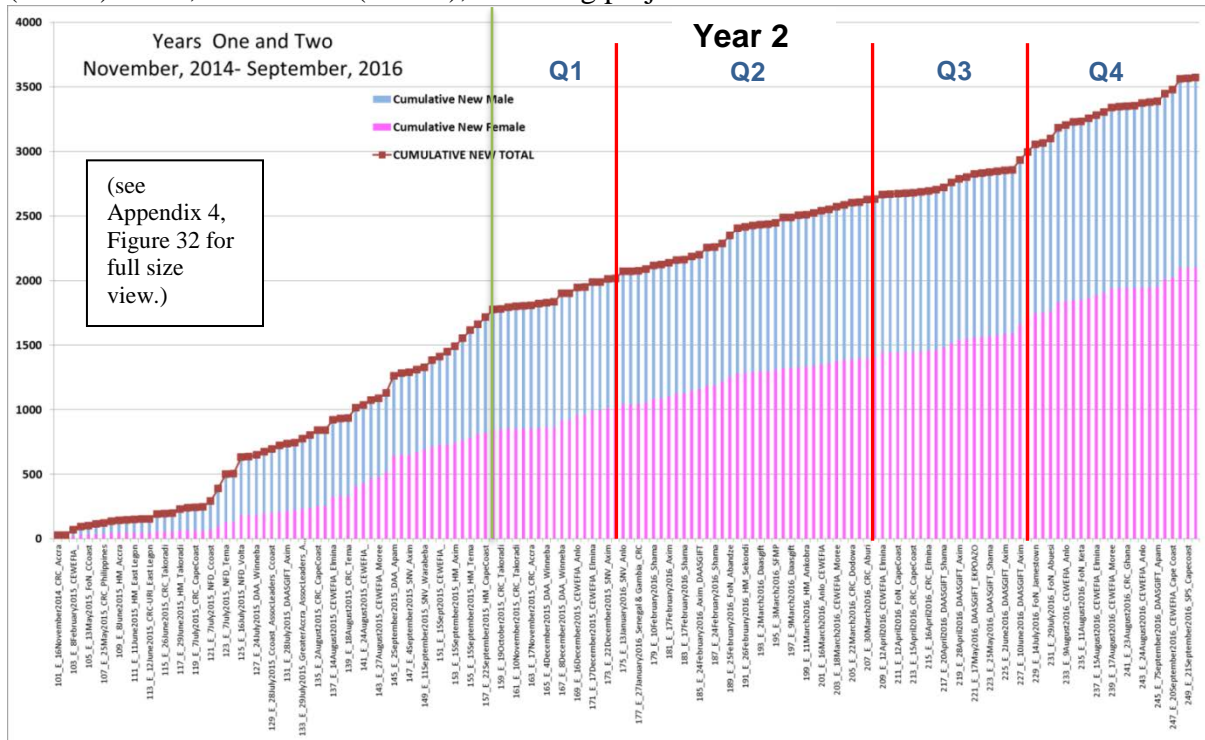
**Figure 12 Cumulative and Unique number of stakeholders engaged in SFMP events, November, 2014 through September 2016.**

Note: By the end of the second year of the SFMP, a cumulative total of 5,707 participants in all events--- more than double Year 1.



**Figure 13 Cumulative number of stakeholders engaged in SFMP events, November, 2014 through September 2016, by gender.**

Note: The trends for cumulative involvement of stakeholders through Year 2 are 2,304 men (40.4%) and 3,403 women (59.6%), including project staff and facilitators



**Figure 14 Cumulative number of new stakeholders engaged in SFMP events, November, 2014 through September 2016, by gender**

The cumulative proportion of women as new individuals involved with the SFMP has increased substantially since the beginning of the second year of the project. The number of

unique individuals which the SFMP reached through these events was 3574, including 1,472 men (41.2%) and 2,102 (58.8%) women.

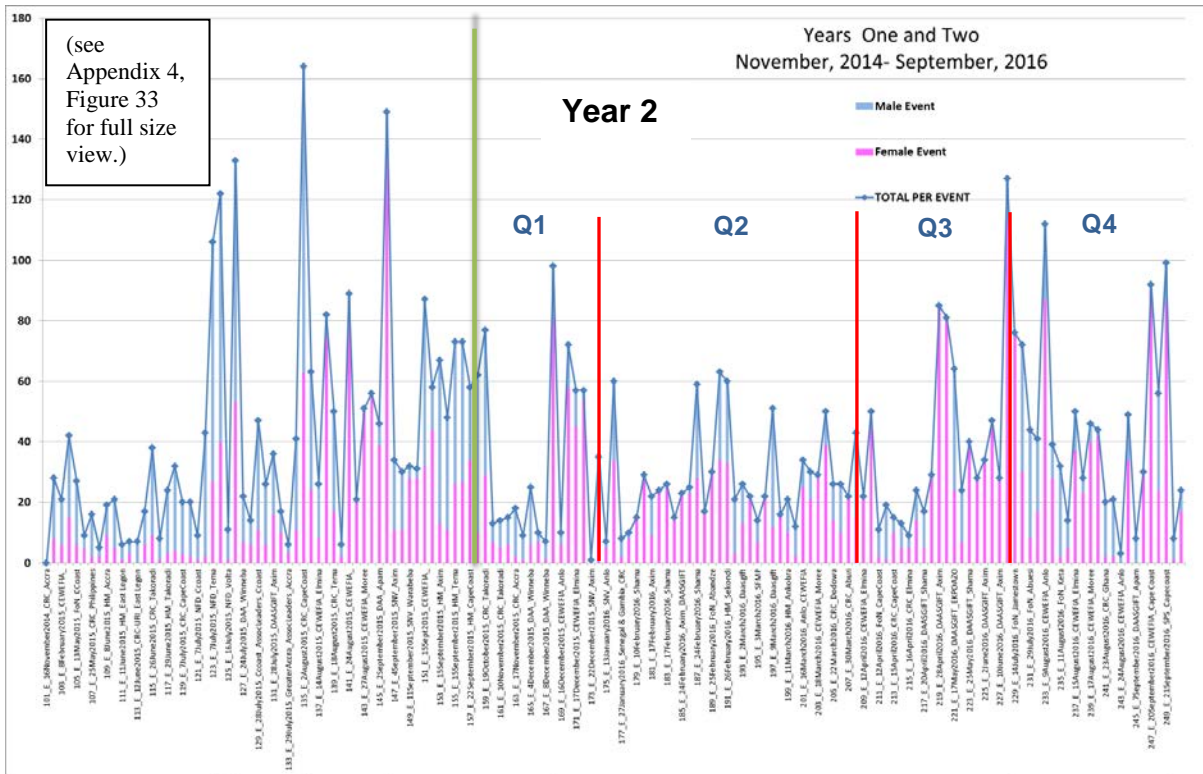


Figure 15 Number of men and women participating in each Year 1 and Year 2 event

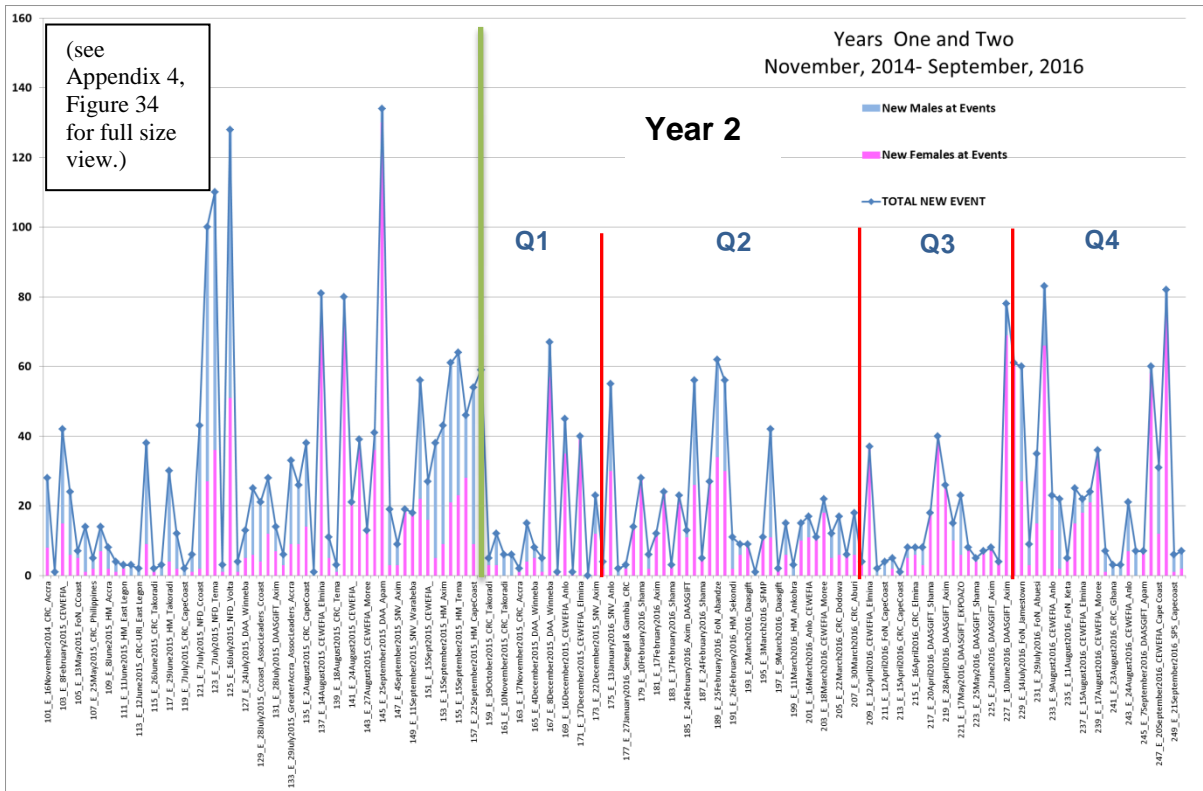
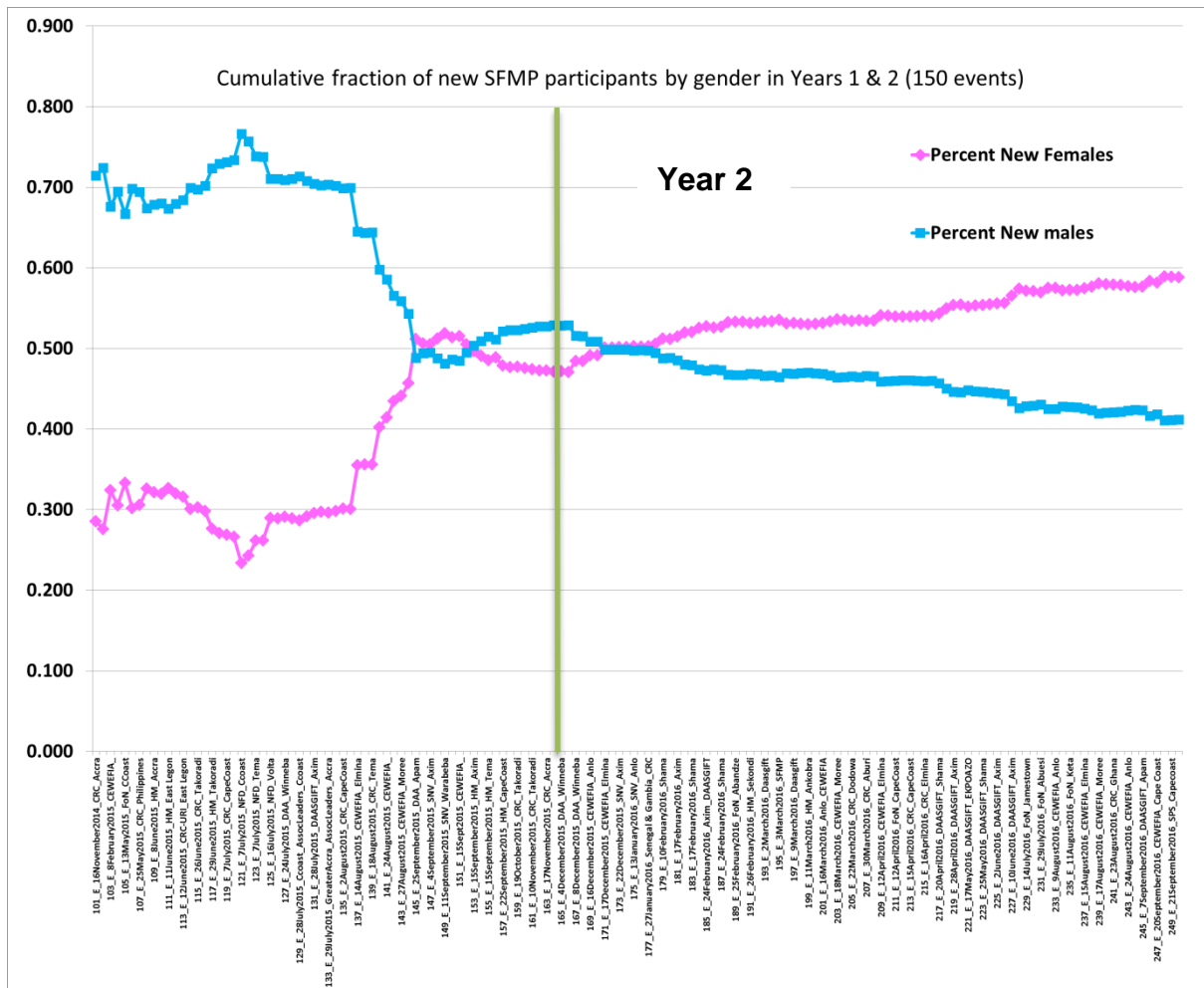
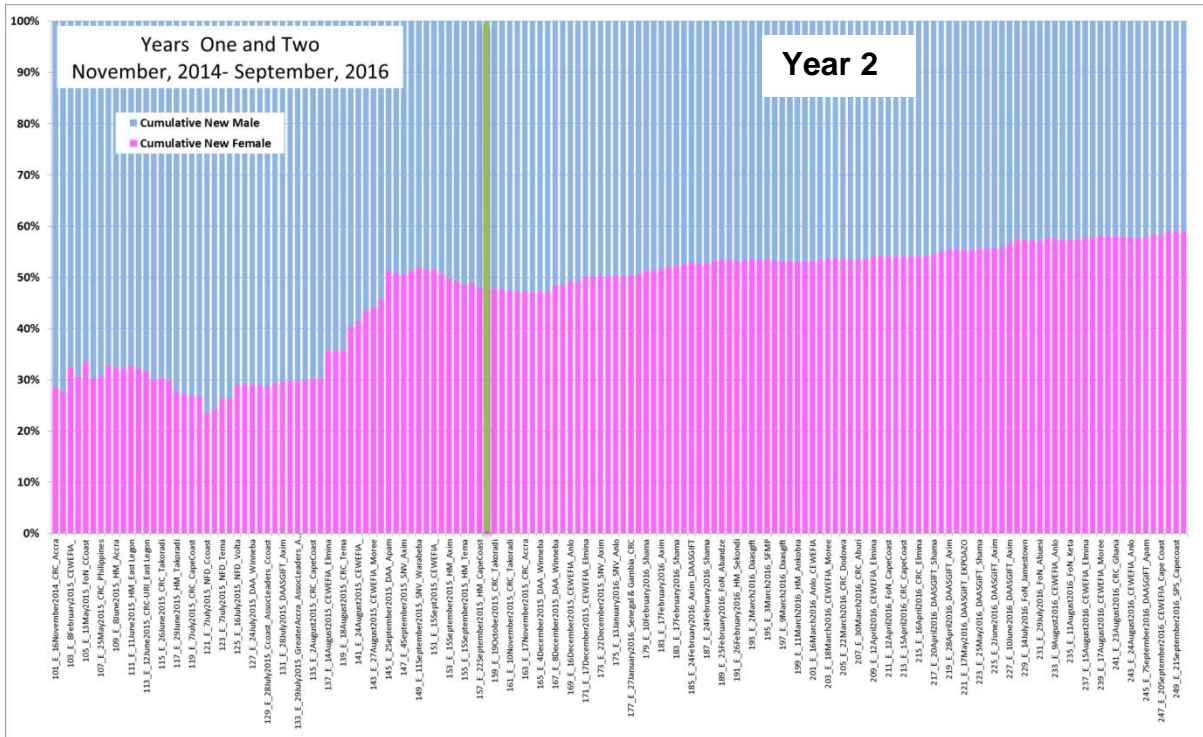


Figure 16 Number of new men and women participating in each Year 1 and 2 event



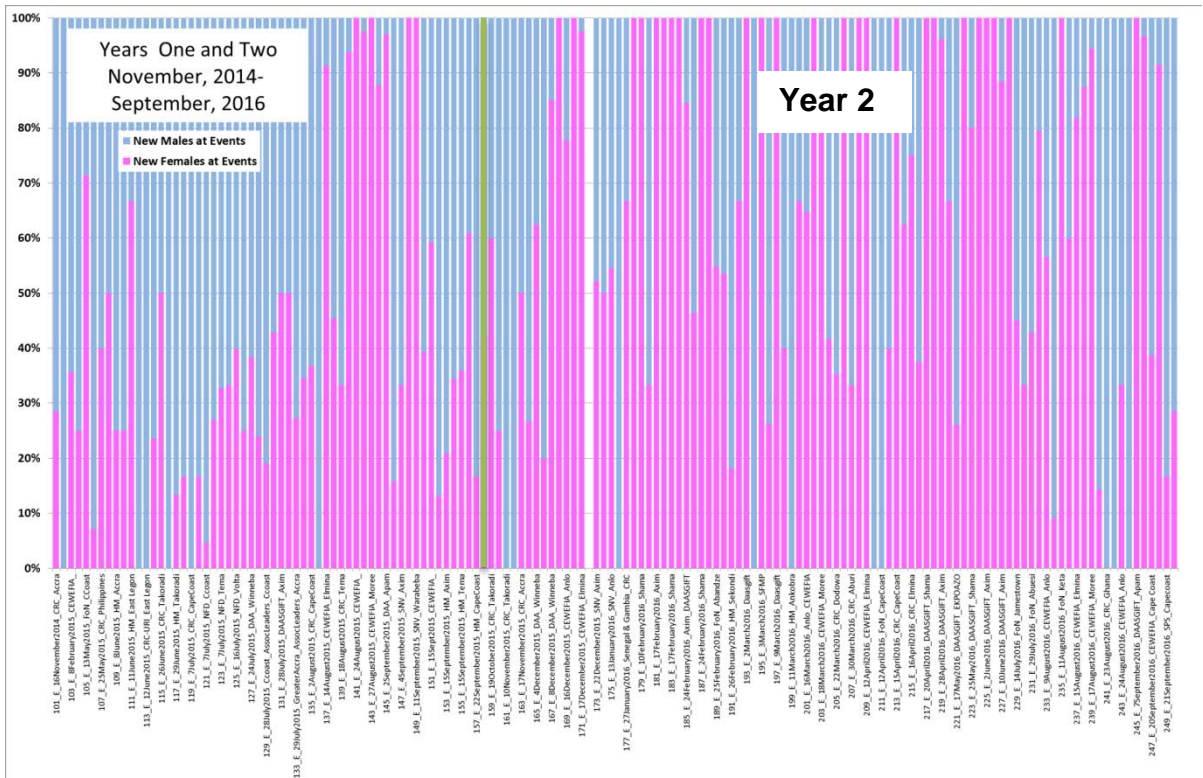
**Figure 17 Cumulative fraction of new SFMP participants by gender in Year 1 and Year 2 (150 events)**

The cumulative proportion of women as new individuals involved with the SFMP increased by 150% during the second year, as shown in Figure 17, passing above 50% at the end of calendar year 2015 and steadily growing to 58.8% by the close of Year 2. The ratio of cumulative new participants to cumulative total participants in events was 0.70 by the end of Year 1, dropping somewhat to 0.62 by the end of Year 2, indicating that a greater proportion of stakeholders had been involved in more than one activity. By the end of Year 2, 995 people had been involved in more than one activity, and 443 more than two.



**Figure 18 Cumulative proportion of new men and women participating in Year 1 and Year 2 SFMP events**

The proportion of new women involved in the SFMP’s activities was 47.7 % at the end of Year 1 , reaching 58.8 % of new stakeholders in September, 2016.

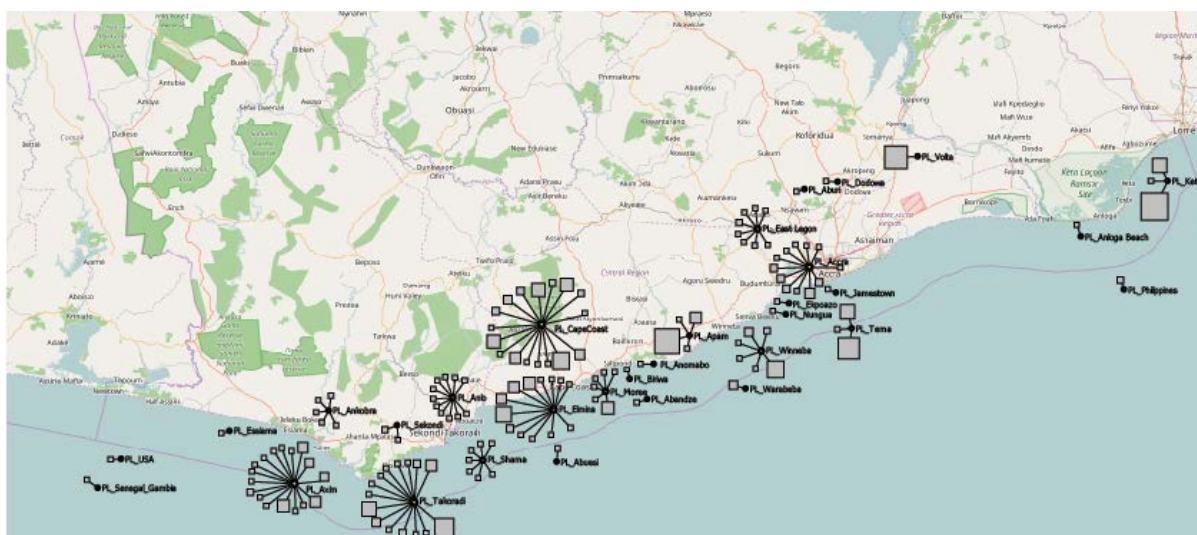


**Figure 19 Proportion of men and women participating in each Year 1 and Year 2 event**



## Stakeholder engagement and constituency building: the SFMP social network

Figure 20 shows the geographic location, number and relative size of the 150 events used in this analysis of Years 1 and 2. The squares represent individual events, their relative size represents the number of participants. In contrast to the predecessor ICFG project, the SFMP can be seen to be active in all four coastal regions, especially the Central Region.

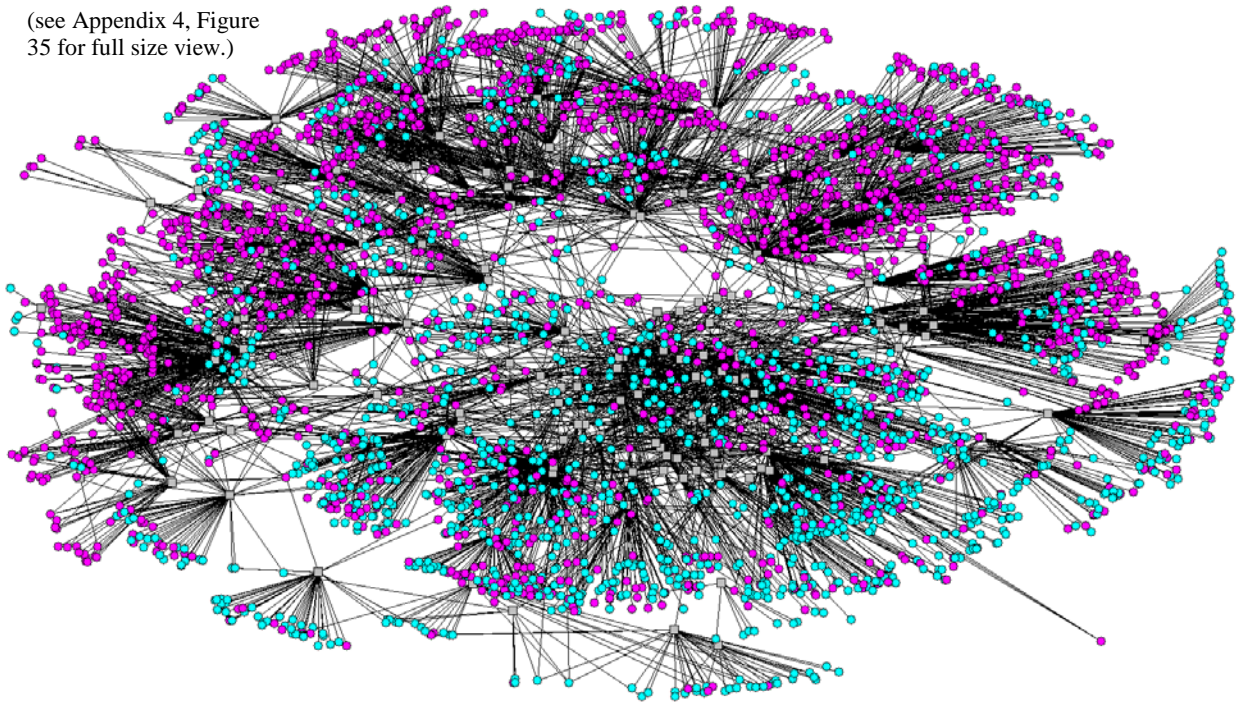


**Figure 20 Relative geographic distribution and size of Year 1 and 2 SFMP events**

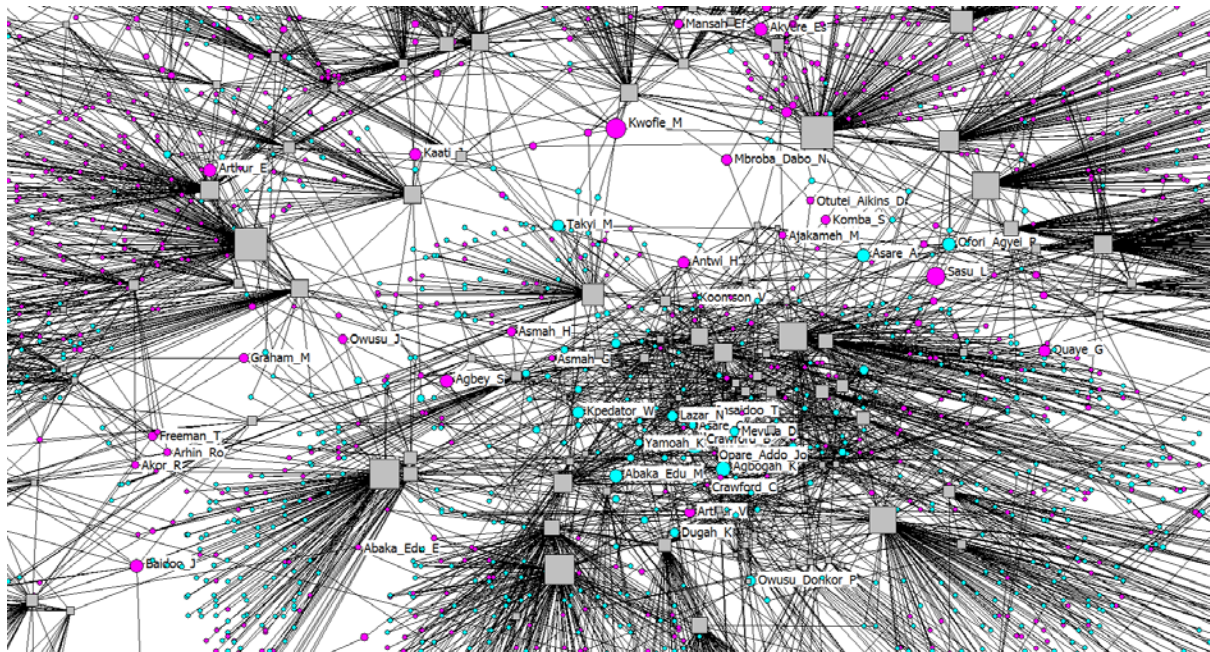
Figure 21 is a representation of the stakeholder network of SFMP as of the end of September, 2016, including 3,575 people as well as project staff and partners who participated in the 150 events documented in the CiviCRM data base. The grey boxes are the events, and the circles are individuals, color coded as men (blue) and women (pink) and with the size of the circle indicating the “betweenness” score of the individual. In this representation, both men and women have high betweenness scores. The visualization software clusters both events and individuals who are more central in the physical center of the diagram, and places events and individuals who are not as well connected to others at the periphery. Figure 21 provides a different way to see that a larger proportion of women than men have been involved in the 150 events. It appears that there is a core of mainly blue circles in the center and lower portion of the network, and a larger area and number of events that are mainly pink colored circles.

Figure 22 is an enlarged view of the center of the SFMP network graphic. Not surprisingly, project leaders from URI and the implementing partners appear at the very middle of the diagram. There are a number of larger circles (stakeholders) that represent project leaders and others who have been engaged a mix of activities allowing them to know a great deal about what is going on in the core of the SFMP work in fisheries management but also in the livelihoods and fisheries value chain improvement work that engages many of the women stakeholders. This view also shows that more than a few of the stakeholders and project beneficiaries are tied to some degree to participants in other locations beyond their own coastal community. The SFMP has fostered the development of these horizontal ties through study tours and exchanges among the implementing partners.

(see Appendix 4, Figure 35 for full size view.)



**Figure 21 Year 1 and Year 2 SFMP stakeholder network of 3,575 people involved in 150 events**  
Key: Pink=women, Blue=men, Grey=events.



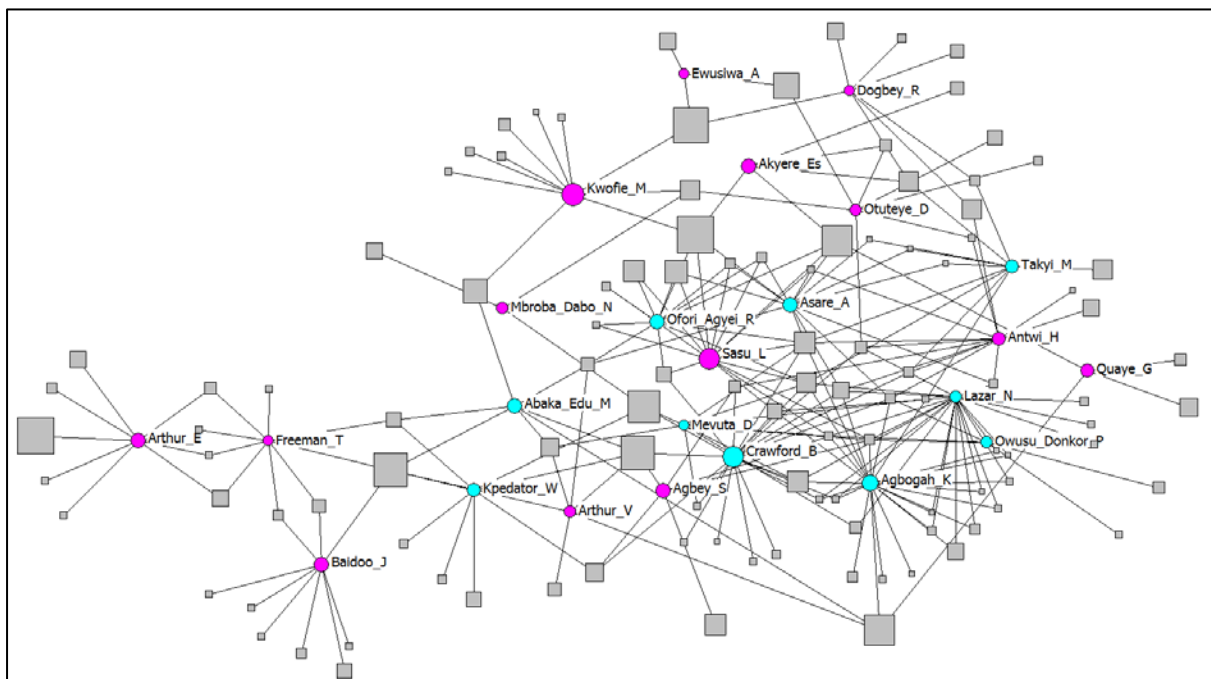
**Figure 22 View of the core of the SFMP network, September 2016**

Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.

Appendix 1 provides details on the participants in each of the 150 SFMP events included in this analysis. Appendix 2 provides more detail on the centrality measures for the events themselves as computed by the UCINET and NetDraw software.

It is important to keep in mind that these representations of the network are based only on the coincidence of attendance of individuals at one or more of the 150 SFMP events included in the CiviCRM data base. Network affiliation analysis of the SFMP offers a broad overview of the growing constituency and social capital being formed to support improved fisheries management and a good starting point for updating the SFMP communications and stakeholder engagement efforts.

The remainder of this section explores the potential use of the affiliation network depictions presented in this report both to understand and to refine the strategy for reaching a critical mass for fisheries management policy reform and implementation, as well as value chain improvements, livelihoods, Anti- Child Labor and Trafficking and other issues of concern to stakeholders and the Government of Ghana. Figure 23 and Appendix 3 shows the 25 individuals with the highest “betweenness” scores. We can see how these individuals are related to each other through joint attendance at one or more SFMP project events in Figure 24.



**Figure 23 Face-to-face events which tie together the top 25 "betweenness" stakeholders**

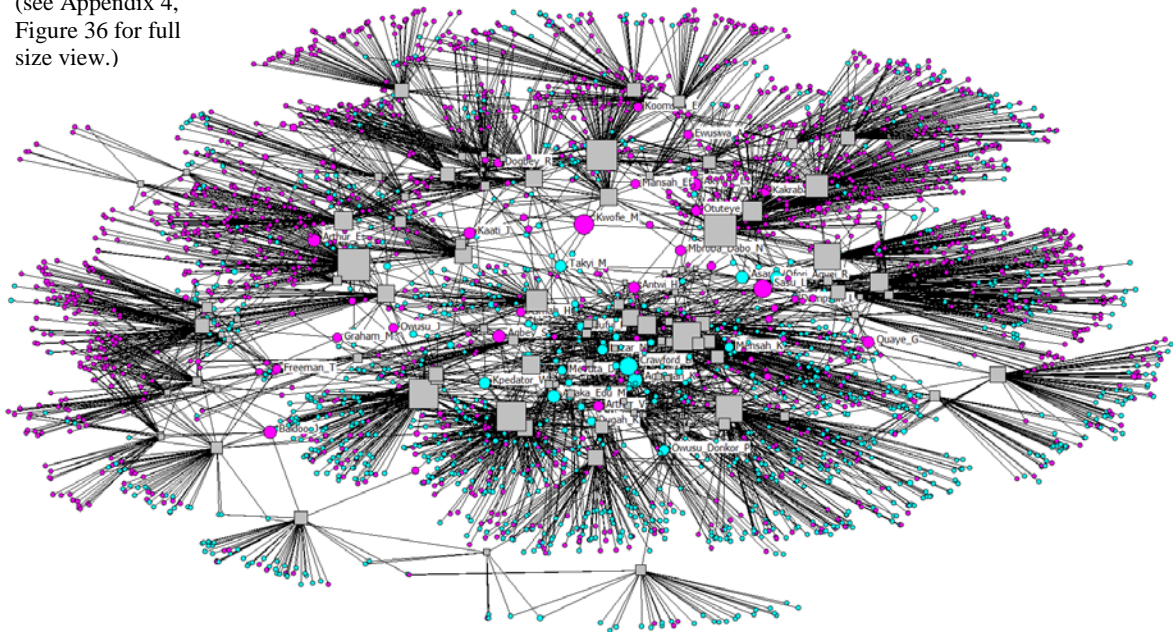
Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.

Keep in mind that these events are by no means the only way in which SFMP leaders and stakeholders interact, rather we are exploring how a very simple, routinely collected and reported type of information can aid in understanding the growth in social capital as well as identify areas where information flow is not as strong as it might need to be. Many of the individuals in Figure 24 occupy similar positions in the network: they have attended several events in conjunction with other prominent members of the network and may be organizational leaders or senior staff. Thus they are quite likely to know and communicate with each other. A different type of social network analysis---ego network--- could easily be conducted by interviewing these individuals about their perceptions of the roles of other actors such as their peers as identified through this affiliation network review.

The 25 most “between” actors in the SFMP network participated in a total of 109 of the 150 events held by the SFMP in Years 1 and 2. Twelve of the 25 are project or sub-contractor staff who receive funding from the SFMP, including 3 based at CRC’s Accra office, and nine

who work for implementing partners. The other thirteen are active members of stakeholder groups or prominent local individuals involved in the fisheries sector. It is highly likely that this core group has contact with each other outside of these events. Collectively the group of top “betweeners” had face-to-face contact with 3,014 other SFMP stakeholders, in many cases more than once. This is depicted in Figure 24. By comparison, the full network as represented by 3,575 event participants is shown in Figure 25.

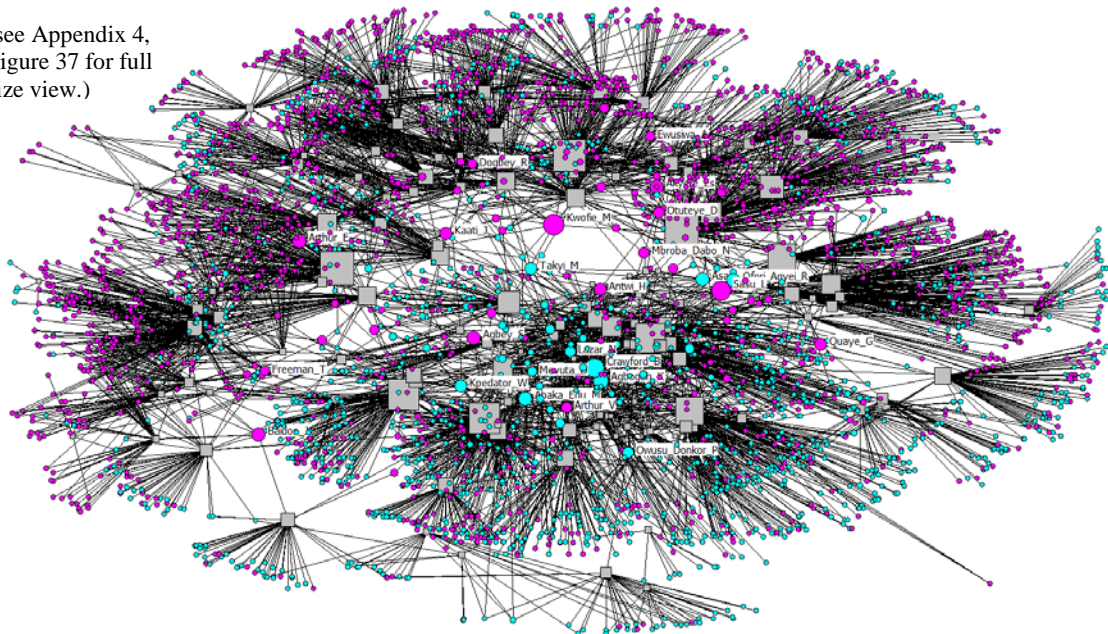
(see Appendix 4, Figure 36 for full size view.)



**Figure 24 The portion of the SFMP network connected by a single degree of separation from the top 25 "betweeners" connecting 3,014 stakeholders**

Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.

(see Appendix 4, Figure 37 for full size view.)



**Figure 25 Complete Year 1 and Year 2 SFMP network, 3,575 event participants**

Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.

## **APPLICATIONS OF CONTACT MANAGEMENT AND NETWORK ANALYSIS FOR THE SFMP**

### **Tracking progress in constituency building**

“Creating Constituencies and Stakeholder Engagement”---project Intermediate Result 3---is a core element of the SFMP, with three major expected results:

- Under-represented groups engaged in decision-making, promoting responsible practices
- Active support for policies and stakeholder behaviors consistent with best practices and legal requirements for responsible fishing (voluntary compliance increased)
- Active participation by stakeholder organizations throughout policy development and management planning processes.

The SFMP reports substantial progress in creating constituencies after its first two years, however it is placing increased emphasis on fisheries management plans that are driven by demand from fishers themselves. The overall direct constituency for small scale fisheries management includes more than 100,000 individuals involved in all phases of capture and processing, while the SFMP so far has reached perhaps 5 percent of those stakeholders. The SFMP reported in March 2017 that about 4000 individuals associated with 110 organizations had been incorporated into its constituency relations data base, with more than 3000 of these providing cell phone numbers to allow future contacts and messaging. The life of project target being tracked for the number of indirect beneficiaries totals 130,000 individuals if closed seasons and/or fishing holidays are adopted.

Fisheries Watch Volunteer groups were being pilot tested in Year 3: “The Fisheries Watch Program will help create a sense of ownership among fisher folk which will in turn increase cooperation from coastal communities.” (Year 3 Quarter 1 Progress report, p. 9). The SFMP also is undertaking peer to peer efforts to build understanding and support for the recently adopted Ghana National Fisheries Management Plan through Fisherman to Fisherman dialogues around the coast in conjunction with the Ghana National Canoe Fishermen Council. These events, launched during World Fisheries Day, attracted media coverage as well. Additional themes getting this multi-faceted treatment include Anti-Child Labor, Illegal, Unreported and Unregulated fishing, the health fish campaign featured at World Rural Women’s Day, and Best Fisheries Practices Awards. The SFMP has also cultivated a network work of Ghana Journalists for Sustainable Fishing.

Additional networks are being formed around local fisheries and shellfish management in the Ankobra and Pra rivers and the Densu estuary and Post-Harvest Processing Knowledge Development and Extension. Many of the events which have engaged women are related to capacity building for operating Micro, Small and Medium-scale Enterprises (MSMEs) and adopting new technology for safer, more efficient fish smoking. Village Savings and Loan Associations are being formed in rural areas to aid in making small but critical amounts of capital available to MSMEs. Another form of networking is being pursued through private – public partnerships with the insurance industry and telecom industry. The SFMP has also conducted organizational assessments for its civil society implementing partner organizations, Ghana fisheries related government units, and other partner groups including the National Fish Processors and Traders Association (NAFPTA) and the Ghana Industrial Trawlers Association (GITA).

### **Extending the Network Data Base**

Many of the SFMP staff and partner contacts are not fully captured in this event-based network analysis. Extensive additional contacts take place among fisheries related

organizations, their staff and memberships, small fisheries and value chain businesses, public officials, and community members engaged in facets of small scale fisheries. The SFMP communications staff is expanding its collection of information to include organizational affiliations and --- where possible --- rosters of membership and staff who may not yet have been contacted via an SFMP related activity. The SFMP is aware of the importance of directly reaching the memberships of fisheries related organizations, not simply gathering the leaders or representatives of the groups together and assuming that information and ideas will flow easily in both directions.

For example, partners and SFMP staff maintain contact with additional groups and organization members that do not get registered as a formal event of the types where sign-in sheets and accurate reporting are required for financial management or USAID required tracking. SFMP staff has begun collecting these sources of information to augment its ability to document and manage stakeholder contacts.

Information about SFMP event location is fairly complete, but the sign-in sheets used to create the CiviCRM contact information usually do not request information about the primary community of residence of the individual. This would help in understanding the SFMP reach into fishing communities that are not presently a focus of core project activities.

The Ministry of Fisheries and Aquaculture Development and the Fisheries Commission may want to adopt some of the approaches possible using constituency relationship management in stakeholder engagement and to promote understanding, acceptance and compliance with fisheries plans and regulations, drawing on its fishing vessel registration program and other outreach activities. The larger non-governmental organizations representing fishing stakeholder groups, as well as current SFMP partners, might also find value in improving their approach to constituency contact management.

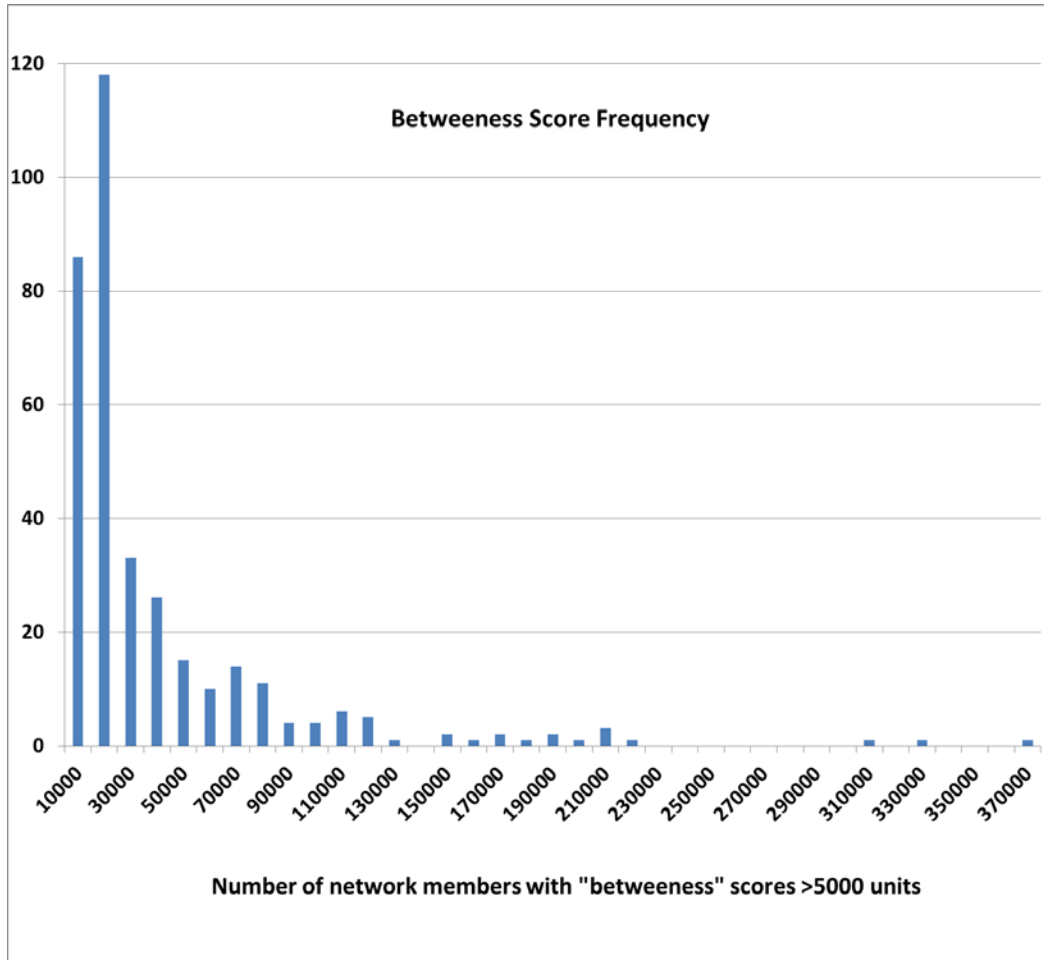
The Coastal Sustainable Landscape Project and the University of Cape Coast through the USAID/UCC Fisheries and Coastal Management Capacity Building Support Project also are building networks of partners, stakeholders and beneficiaries which partly intersect with and potentially extend the reach of SFMP materials, messages and invitations to engage in fisheries management issues. Conversely the SFMP constituency network could be used to expand the reach of its sister projects.

### **Extending the Network Analysis**

Affiliation network analysis using the readily available information routinely collected by the SFMP provides an interesting and useful overview of its patterns of contact with stakeholders and project beneficiaries over the life of the project. As the network diagrams show, there are many “isolates” or individuals who have been recorded attending only a single event. As noted above, the SFMP constituency network in reality is larger than that recorded via event participation alone. These individuals may represent a large organization whose members should also be of interest. The SFMP should not expect that a single representative is able to convey messages to, or fully communicate information from the entire membership.

In addition, the SFMP can use egonet research to inquire in more depth about the intensity of SFMP and partner relationships and contacts with beneficiaries. This is done by selecting a target group and interviewing them, even using just a few very simple questions, about their personal relationships or their identification of the most trusted or influential opinion leaders among fishing industry stakeholders, organizations, fishing communities and policy-makers. For example, the affiliation network analysis identifies 350 individuals with elevated “betweenness”, scores who likely are national, regional, and local leaders that can directly reach many more members of organizations, decision-makers or community members than

captured in this baseline (see Figure 26). The SFMP can increase its understanding of and expand the extent of contacts with the different clusters of stakeholders whom it is trying to engage, listen to, and promote behavior change. These influential “betweeners” are among those most likely to provide access to and information about the views and concerns of the remaining 95% of the fisheries constituency itself.



**Figure 26 SFMP network members with high “betweenness” scores at the end of Year 2**

The SFMP and communications teams of its partners are working with the Ministry of Fisheries and Aquaculture Development and the Fisheries Commission to inform and engage the much larger interested and concerned public. Members of the concerned public do not work in the industry but have a strong interest in the success of fisheries management, improvements in the fisheries value chain and the end of child labor and trafficking in the fishing industry. As part of designing and evaluating the impacts of campaigns focusing on mass and social media and face-to-face events, the SFMP can document how effectively it is reaching opinion leaders and non-fisheries stakeholders. It can also continually ask who else it needs to reach to create and sustain a sustained critical mass of pressure to adopt and implement policies and practices to recover fisheries and aid fishers, fish processors and fishing communities.

## REFERENCES

- Borgatti, S. P., Everett, M. G., & Johnson, J. C. (2013). *Analyzing social networks*. SAGE Publications Limited. ISBN-13: 978-1446247419.
- Cinner J.E., Huchery, C., Hicks, C.C., Daw, T.M., Marshall, N., Wamukota, A., Allison, E. H. (2015). Changes in adaptive capacity of Kenyan fishing communities. *Nature Climate Change* 29 June 2015. doi:10.1038/nclimate2690.
- Huysman, M. and Wulf, V. (2005). The role of information technology in building and sustaining the relational base of communities. *The Information Society*. 21: 81-89.
- Johnstone, G. (2009). Importance of Social Capital. *Samudra Report No. 52*. March, 2009. <http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/4722/social%20capital.pdf>
- Page, G. (2013). *Hen Mpoano, Our Coast, Our Future: Building Capacity for Adapting to a Rapidly Changing Coastal Zone: Lessons Learned*. Integrated Coastal and Fisheries Governance Project. Narragansett, RI: Coastal Resources Center, Graduate School of Oceanography, University of Rhode Island. 72 pp.
- Robadue Jr. D., Bowen, R., Caille, G., Paez, D., Mmochi, A. (2010). How Digital is What Divides Us? *Global Networks of Practice for Coastal Management*. *Coastal Management* Vol. 38 , Iss. 3, 2010



## **APPENDICES**

- 1 Year 1 and Year 2 Detailed Information on SFMP events**
- 2 Centrality of SFMP Events, Year 1 and Year 2 combined information**
- 3 SFMP participants with 25 highest "betweenness" scores, end of Year 2**
- 4 Full size view of selected graphics**

## 1 Year 1 and Year 2 Detailed Information on SFMP events

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
101_E_16November2014_CRC_Accra	28	28	8	8	20	20	28	8	20	8	20	0.286	0.714
102_E_17November2014_CRC_Accra	21	49	6	14	15	35	29	0	1	8	21	0.276	0.724
103_E_8February2015_CEWEFIA_	42	91	15	29	27	62	71	15	27	23	48	0.324	0.676
104_E_4May2015_HM_Takoradi	27	118	6	35	21	83	95	6	18	29	66	0.305	0.695
105_E_13May2015_FoN_CCoast	9	127	5	40	4	87	102	5	2	34	68	0.333	0.667
106_E_19May2015_FoN_Sekondi	16	143	2	42	14	101	116	1	13	35	81	0.302	0.698
107_E_25May2015_CRC_Philippines	5	148	2	44	3	104	121	2	3	37	84	0.306	0.694
108_E_25May2015_SSG_Philippines	19	167	9	53	10	114	135	7	7	44	91	0.326	0.674
109_E_8June2015_HM_Accra	21	188	5	58	16	130	143	2	6	46	97	0.322	0.678
110_E_10June2015_CRC-URI_East Legon	6	194	1	59	5	135	147	1	3	47	100	0.320	0.680
111_E_11June2015_HM_East Legon	7	201	3	62	4	139	150	2	1	49	101	0.327	0.673
112_E_11June2015_HM_Takoradi	7	208	0	62	7	146	153	0	3	49	104	0.320	0.680
113_E_12June2015_CRC-URI_East Legon	17	225	6	68	11	157	155	0	2	49	106	0.316	0.684
114_E_23June2015_SNV_Axim	38	263	9	77	29	186	193	9	29	58	135	0.301	0.699
115_E_26June2015_CRC_Takoradi	8	271	1	78	7	193	195	1	1	59	136	0.303	0.697
116_E_26June2015_HM_Takoradi	24	295	3	81	21	214	198	0	3	59	139	0.298	0.702
117_E_29June2015_HM_Takoradi	32	327	4	85	28	242	228	4	26	63	165	0.276	0.724
118_E_7July2015_CapeCoast_DAA	20	347	3	88	17	259	240	2	10	65	175	0.271	0.729
119_E_7July2015_CRC_CapeCoast	20	367	2	90	18	277	242	0	2	65	177	0.269	0.731
120_E_7JULY2015_HM_Essiana	9	376	1	91	8	285	248	1	5	66	182	0.266	0.734
121_E_7July2015_NFD_Ccoast	43	419	2	93	41	326	291	2	41	68	223	0.234	0.766
122_E_7July2015_NFD_Takoradi	106	525	27	120	79	405	391	27	73	95	296	0.243	0.757

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
123_E_7July2015_NFD_Tema	122	647	40	160	82	487	501	36	74	131	370	0.261	0.739
124_E_15July2015_CRC_East Legon	11	658	1	161	10	497	504	1	2	132	372	0.262	0.738
125_E_16July2015_NFD_Volta	133	791	53	214	80	577	632	51	77	183	449	0.290	0.710
126_E_21July2015_SSG_	22	813	7	221	15	592	636	1	3	184	452	0.289	0.711
127_E_24July2015_DAA_Winneba	14	827	6	227	8	600	649	5	8	189	460	0.291	0.709
128_E_27July2015_Takoradi_AssocLeaders_Takoradi	47	874	11	238	36	636	674	6	19	195	479	0.289	0.711
129_E_28July2015_Ccoast_AssocLeaders_Ccoast	26	900	6	244	20	656	695	4	17	199	496	0.286	0.714
130_E_28July2015_CRC_CapeCoast	36	936	16	260	20	676	723	12	16	211	512	0.292	0.708
131_E_28July2015_DAASGIFT_Axim	17	953	10	270	7	683	737	7	7	218	519	0.296	0.704
132_E_29July2015_CRC_Accra	6	959	3	273	3	686	743	3	3	221	522	0.297	0.703
133_E_29July2015_GreaterAccra_AssocLeaders_Accra	41	1000	11	284	30	716	776	9	24	230	546	0.296	0.704
134_E_30July2015_Volta_AssocLeaders_Keta	164	1164	63	347	101	817	802	9	17	239	563	0.298	0.702
135_E_2August2015_CRC_CapeCoast	63	1227	24	371	39	856	840	14	24	253	587	0.301	0.699
136_E_4August2015_CRC_CapeCoast	26	1253	8	379	18	874	841	0	1	253	588	0.301	0.699
137_E_14August2015_CEWEFIA_Elmina	82	1335	75	446	7	881	921	74	7	327	594	0.355	0.645
138_E_14August2015_CRC_CapeCoast	50	1385	17	463	33	914	932	5	6	332	600	0.356	0.644
139_E_18August2015_CRC_Tema	6	1391	2	465	4	918	935	1	2	333	602	0.356	0.644
140_E_21August2015_DAA_Winneba	89	1480	82	547	7	925	1015	75	5	408	607	0.402	0.598
141_E_24August2015_CEWEFIA_	21	1501	21	568	0	925	1036	21	0	429	607	0.414	0.586
142_E_26August2015_CEWEFIA_	51	1552	50	618	1	926	1075	38	1	467	608	0.434	0.566
143_E_27August2015_CEWEFIA_Moree	56	1608	55	673	1	927	1088	13	0	480	608	0.441	0.559
144_E_1September2015_DAA_Apam	46	1654	39	712	7	934	1129	36	5	516	613	0.457	0.543
145_E_2September2015_DAA_Apam	149	1803	139	851	10	944	1263	13 0	4	646	617	0.511	0.489

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
146_E_3September2015_SNV_Axim	34	1837	11	862	23	967	1282	3	16	649	633	0.506	0.494
147_E_4September2015_SNV_Axim	30	1867	11	873	19	986	1291	3	6	652	639	0.505	0.495
148_E_11September2015_DAA_Winneba	32	1899	28	901	4	990	1310	19	0	671	639	0.512	0.488
149_E_11September2015_SNV_Warabeba	31	1930	28	929	3	993	1328	18	0	689	639	0.519	0.481
150_E_14September2015_FoN_CapeCoast	87	2017	32	961	55	1048	1384	22	34	711	673	0.514	0.486
151_E_15Sept2015_CEWEFIA_	58	2075	44	1005	14	1062	1411	16	11	727	684	0.515	0.485
152_E_15September2015_FoN_UCC	67	2142	13	1018	54	1116	1449	5	33	732	717	0.505	0.495
153_E_15September2015_HM_Axim	48	2190	11	1029	37	1153	1492	9	34	741	751	0.497	0.503
154_E_15September2015_HM_Takoradi	73	2263	26	1055	47	1200	1553	21	40	762	791	0.491	0.509
155_E_15September2015_HM_Tema	73	2336	27	1082	46	1246	1617	23	41	785	832	0.485	0.515
156_E_18September2015_DAASGIFT_Axim	58	2394	34	1116	24	1270	1663	28	18	813	850	0.489	0.511
157_E_22September2015_HM_CapeCoast	62	2456	10	1126	52	1322	1717	9	45	822	895	0.479	0.521
158_E_22September2015_HM_Keta	77	2533	29	1155	48	1370	1776	25	34	847	929	0.477	0.523
159_E_19October2015_CRC_Takoradi	13	2546	7	1162	6	1376	1781	3	2	850	931	0.477	0.523
160_E_10November 2015_GITA-FC-UCC_USA	14	2560	5	1160	9	1385	1793	3	9	853	940	0.476	0.524
161_E_10November2015_CRC_Takoradi	15	2575	6	1166	9	1394	1799	0	6	853	946	0.474	0.526
162_E_12November2015_SSG_Accra	18	2593	2	1168	16	1410	1805	0	6	853	952	0.473	0.527
163_E_17November2015_CRC_Accra	9	2602	1	1169	8	1418	1807	1	1	854	953	0.473	0.527
164_E_17November2015_SSG_Accra	25	2627	6	1175	19	1437	1822	4	11	858	964	0.471	0.529
165_E_4December2015_DAA_Winneba	10	2637	7	1182	3	1440	1830	5	3	863	967	0.472	0.528
166_E_8December2015_CRC_East Legon	7	2644	1	1183	6	1446	1835	1	4	864	971	0.471	0.529
167_E_8December2015_DAA_Winneba	98	2742	81	1264	17	1463	1902	57	10	921	981	0.484	0.516
168_E_15December2015_CRC_East Legon	10	2752	6	1270	4	1467	1903	1	0	922	981	0.484	0.516
169_E_16December2015_CEWEFIA_Anlo	72	2824	58	1328	14	1481	1948	35	10	957	991	0.491	0.509
170_E_16December2015_CEWEFIA_AnlogaBeach	57	2881	45	1373	12	1493	1949	1	0	958	991	0.492	0.508

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
171_E_17December2015_CEWEFIA_Elmina	57	2938	54	1427	3	1496	1989	39	1	997	992	0.501	0.499
172_E_18December2015_CEWEFIA_Moree	1	2939	1	1428	0	1496	1989	0	0	997	992	0.501	0.499
173_E_22December2015_SNV_Axim	35	2974	17	1445	18	1514	2012	12	11	1009	1003	0.501	0.499
174_E_24December2015_DAASGIFT_Axim	7	2981	5	1450	2	1516	2016	2	2	1011	1005	0.501	0.499
175_E_13January2016_SNV_Anlo	60	3041	34	1484	26	1542	2071	30	25	1041	1030	0.503	0.497
176_E_14January2016_CRC_Takoradi	8	3049	2	1486	6	1548	2073	0	2	1041	1032	0.502	0.498
177_E_27January2016_Senegal & Gambia_CRC	10	3059	8	1494	2	1550	2076	2	1	1043	1033	0.502	0.498
178_E_10February2016	15	3074	15	1509	0	1550	2090	14	0	1057	1033	0.506	0.494
179_E_10February2016_Shama	29	3103	29	1538	0	1550	2118	28	0	1085	1033	0.512	0.488
180_E_16February2016_DAA_Winneba	22	3125	9	1547	13	1563	2124	2	4	1087	1037	0.512	0.488
181_E_17February2016_Axim	24	3149	24	1571	0	1563	2136	12	0	1099	1037	0.515	0.485
182_E_17February2016_DAASGIFT_Axim	26	3175	26	1597	0	1563	2160	24	0	1123	1037	0.520	0.480
183_E_17February2016_Shama	15	3190	15	1612	0	1563	2163	3	0	1126	1037	0.521	0.479
184_E_18February2016_DAASGIFT_Ankobra	23	3213	23	1635	0	1563	2186	23	0	1149	1037	0.526	0.474
185_E_24February2016_Axim_DAASGIFT	25	3238	23	1658	2	1565	2199	11	2	1160	1039	0.528	0.472
186_E_24February2016_Fon_Anomabo	59	3297	28	1686	31	1596	2255	26	30	1186	1069	0.526	0.474
187_E_24February2016_Shama	17	3314	17	1703	0	1596	2260	5	0	1191	1069	0.527	0.473
188_E_25February2016_DAASGIFT_Ankobra	30	3344	30	1733	0	1596	2287	27	0	1218	1069	0.533	0.467
189_E_25February2016_FoN_Abandze	63	3407	34	1767	29	1625	2349	34	28	1252	1097	0.533	0.467
190_E_26February2016_FoN_Biriwa	60	3467	33	1800	27	1652	2405	30	26	1282	1123	0.533	0.467
191_E_26February2016_HM_Sekondi	21	3488	3	1803	18	1670	2416	2	9	1284	1132	0.531	0.469
192_E_29February2016_SNV_CapeCoast	26	3514	13	1816	13	1683	2425	6	3	1290	1135	0.532	0.468
193_E_2March2016_Daasgift	22	3536	22	1838	0	1683	2434	9	0	1299	1135	0.534	0.466
194_E_3March2016_East Legon_CEWEFIA	14	3550	7	1845	7	1690	2435	0	1	1299	1136	0.533	0.467
195_E_3March2016_SFMP	22	3572	21	1866	1	1691	2446	11	0	1310	1136	0.536	0.464

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
196_E_8March2016_Anlo_CEWEFIA	51	3623	12	1878	39	1730	2488	11	31	1321	1167	0.531	0.469
197_E_9March2016_Daasgift	16	3639	16	1894	0	1730	2490	2	0	1323	1167	0.531	0.469
198_E_10March2016_CEWEFIA_ELMINA	21	3660	10	1904	11	1741	2505	6	9	1329	1176	0.531	0.469
199_E_11March2016_HM_Ankobra	12	3672	2	1906	10	1751	2508	0	3	1329	1179	0.530	0.470
200_E_14March2016_CEWEFIA_Moree	34	3706	25	1931	9	1760	2523	10	5	1339	1184	0.531	0.469
201_E_16March2016_Anlo_CEWEFIA	30	3736	21	1952	9	1769	2540	11	6	1350	1190	0.531	0.469
202_E_17March2016_DAASGIFT_	29	3765	29	1981	0	1769	2551	11	0	1361	1190	0.534	0.466
203_E_18March2016_CEWEFIA_Moree	50	3815	39	2020	11	1780	2573	18	4	1379	1194	0.536	0.464
204_E_21March2016_CEWEFIA_Anlo	26	3841	14	2034	12	1792	2585	5	7	1384	1201	0.535	0.465
205_E_22March2016_CRC_Dodowa	26	3867	10	2044	16	1808	2602	6	11	1390	1212	0.534	0.466
206_E_23March2016_DAASGIFT_Axim	22	3889	22	2066	0	1808	2608	6	0	1396	1212	0.535	0.465
207_E_30March2016_CRC_Aburi	43	3932	15	2081	28	1836	2626	6	12	1402	1224	0.534	0.466
208_E_30March2016_DAASGIFT_Axim	22	3954	22	2103	0	1836	2630	4	0	1406	1224	0.535	0.465
209_E_12April2016_CEWEFIA_Elmina	50	4004	50	2153	0	1836	2667	37	0	1443	1224	0.541	0.459
210_E_12April2016_CRC_Elmina	11	4015	2	2155	9	1845	2669	0	2	1443	1226	0.541	0.459
211_E_12April2016_FoN_CapeCoast	19	4034	1	2156	18	1863	2673	0	4	1443	1230	0.540	0.460
212_E_14April2016_DAASGIFT_Shama	15	4049	10	2166	5	1868	2678	2	3	1445	1233	0.540	0.460
213_E_15April2016_CRC_CapeCoast	13	4062	5	2171	8	1876	2679	1	0	1446	1233	0.540	0.460
214_E_16April2016_CRC_Elmina	9	4071	5	2176	4	1880	2687	5	3	1451	1236	0.540	0.460
215_E_16April2016_CRC_Elmina	24	4095	14	2190	10	1890	2695	6	2	1457	1238	0.541	0.459
216_E_16April2016_CRC_Takoradi	17	4112	5	2195	12	1902	2703	3	5	1460	1243	0.540	0.460
217_E_20April2016_DAASGIFT_Shama	29	4141	29	2224	0	1902	2721	18	0	1478	1243	0.543	0.457
218_E_21April2016_DAASGIFT_Ankobra	85	4226	85	2309	0	1902	2761	40	0	1518	1243	0.550	0.450
219_E_28April2016_DAASGIFT_Axim	81	4307	80	2389	1	1903	2787	25	1	1543	1244	0.554	0.446
220_E_4May2016_CRC_Takoradi	64	4371	24	2413	40	1943	2802	10	5	1553	1249	0.554	0.446

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
221_E_17May2016_DAASGIFT_EKPOAZO	24	4395	7	2420	17	1960	2825	6	17	1559	1266	0.552	0.448
222_E_19May2016_DAASGIFT_Axim	40	4435	40	2460	0	1960	2833	8	0	1567	1266	0.553	0.447
223_E_25May2016_DAASGIFT_Shama	28	4463	27	2487	1	1961	2838	4	1	1571	1267	0.554	0.446
224_E_2June2016_DAASGIFT_Ankobra	34	4497	34	2521	0	1961	2845	7	0	1578	1267	0.555	0.445
225_E_2June2016_DAASGIFT_Axim	47	4544	47	2568	0	1961	2853	8	0	1586	1267	0.556	0.444
226_E_8June2016_DAASGIFT_Shama	28	4572	27	2595	1	1962	2857	4	0	1590	1267	0.557	0.443
227_E_10June2016_DAASGIFT_Axim	127	4699	114	2709	13	1975	2935	69	9	1659	1276	0.565	0.435
228_E_5July2016_CEWEFIA_Anlo	76	4775	75	2784	1	1976	2996	61	0	1720	1276	0.574	0.426
229_E_14July2016_FoN_Jamestown	72	4847	30	2814	42	2018	3056	27	33	1747	1309	0.572	0.428
230_E_15July2016_CRC_Takoradi	44	4891	8	2822	36	2054	3065	3	6	1750	1315	0.571	0.429
231_E_29July2016_FoN_Abuesi	41	4932	17	2839	24	2078	3100	15	20	1765	1335	0.569	0.431
232_E_8August2016_CEWEFIA_Moree	112	5044	87	2926	25	2103	3183	66	17	1831	1352	0.575	0.425
233_E_9August2016_CEWEFIA_Anlo	39	5083	28	2954	11	2114	3206	13	10	1844	1362	0.575	0.425
234_E_10August2016_SSG_Accra	32	5115	2	2956	30	2144	3228	2	20	1846	1382	0.572	0.428
235_E_11August2016_FoN_Keta	14	5129	5	2961	9	2153	3233	5	0	1851	1382	0.573	0.427
236_E_23August2016_CEWEFIA_Anlo	50	5179	37	2998	13	2166	3258	15	10	1866	1392	0.573	0.427
237_E_15August2016_CEWEFIA_Elmina	28	5207	23	3021	5	2171	3280	18	4	1884	1396	0.574	0.426
238_E_16August2016_CEWEFIA_Anlo	46	5253	40	3061	6	2177	3304	21	3	1905	1399	0.577	0.423
239_E_17August2016_CEWEFIA_Moree	44	5297	42	3103	2	2179	3340	34	2	1939	1401	0.581	0.419
240_E_22August2016_CRC_Ghana	20	5317	2	3105	18	2197	3347	1	6	1940	1407	0.580	0.420
241_E_23August2016_CRC_Ghana	21	5338	2	3107	19	2216	3350	0	3	1940	1410	0.579	0.421
242_E_23August2016_FoN_Takoradi	3	5341	0	3107	3	2219	3353	0	3	1940	1413	0.579	0.421
243_E_24August2016_CEWEFIA_Anlo	49	5390	34	3141	15	2234	3374	7	14	1947	1427	0.577	0.423
244_E_1September2016_Nungua	8	5398	0	3141	8	2242	3381	0	7	1947	1434	0.576	0.424
245_E_7September2016_DAASGIFT_Apam	30	5428	29	3170	1	2243	3388	7	0	1954	1434	0.577	0.423

Event Name	TOTAL PARTICIPANTS PER EVENT	CUMULATIVE TOTAL PARTICIPANTS	Female Event	Female cumulative	Male Event	Male cumulative	CUMULATIVE NEW TOTAL	New Female at Event	New Male at Event	Cumulative New Female	Cumulative New Male	Percent New Females	Percent New males
246_E_13September_2016_CEWEFIA_Elmina	92	5520	90	3260	2	2245	3448	58	2	2012	1436	0.584	0.416
247_E_20September2016_CEWEFIA_Cape Coast	56	5576	24	3284	32	2277	3479	12	19	2024	1455	0.582	0.418
248_E_20September2016_DAA_Apam	99	5675	86	3370	13	2290	3561	75	7	2099	1462	0.589	0.411
249_E_21September2016_SPS_Capecoast	8	5683	1	3371	7	2297	3567	1	5	2100	1467	0.589	0.411
250_E_23September2016_CEWEFIA_Anlo	24	5707	17	3388	7	2304	3574	2	5	2102	1472	0.588	0.412



## 2 Centrality of SFMP Events, Year 1 and Year 2 combined information

SFMP Event	Bonacich		
	Power	Degree	Betweenness
101_E_16November2014_CRC_Accra	543	28	105682
102_E_17November2014_CRC_Accra	501	21	78195
103_E_8February2015_CEWEFIA_	88	42	106367
104_E_4May2015_HM_Takoradi	278	27	80982
105_E_13May2015_FoN_CCoast	106	9	9282
106_E_19May2015_FoN_Sekondi	248	16	55833
107_E_25May2015_CRC_Philippines	75	5	403
108_E_25May2015_SSG_Philippines	238	19	24806
109_E_8June2015_HM_Accra	356	21	37539
110_E_10June2015_CRC-URI_East Legon	91	6	5370
111_E_11June2015_HM_East Legon	95	7	11441
112_E_11June2015_HM_Takoradi	97	7	13525
113_E_12June2015_CRC-URI_East Legon	256	17	17478
114_E_23June2015_SNV_Axim	75	38	125782
115_E_26June2015_CRC_Takoradi	126	8	12573
116_E_26June2015_HM_Takoradi	203	24	59217
117_E_29June2015_HM_Takoradi	80	32	134135
118_E_7July2015_CapeCoast_DAA	256	20	41204
119_E_7July2015_CRC_CapeCoast	244	20	39768
120_E_7JULY2015_HM_Essiama	20	9	19806
121_E_7July2015_NFD_Ccoast	204	43	137771
122_E_7July2015_NFD_Takoradi	1660	106	563335
123_E_7July2015_NFD_Tema	1555	122	524279
124_E_15July2015_CRC_East Legon	173	11	15682
125_E_16July2015_NFD_Volta	19303	133	249144
126_E_21July2015_SSG_	509	22	96209
127_E_24July2015_DAA_Winneba	87	14	30142
128_E_27July2015_Takoradi_AssocLeaders_Takoradi	821	47	192504
129_E_28July2015_Ccoast_AssocLeaders_Ccoast	164	26	60172
130_E_28July2015_CRC_CapeCoast	602	36	128961
131_E_28July2015_DAASGIFT_Axim	81	17	38388
132_E_29July2015_CRC_Accra	26	6	15
133_E_29July2015_GreaterAccra_AssocLeaders_Accra	148	41	115404
134_E_30July2015_Volta_AssocLeaders_Keta	21834	164	559415
135_E_2August2015_CRC_CapeCoast	1098	63	223683
136_E_4August2015_CRC_CapeCoast	477	26	60773
137_E_14August2015_CEWEFIA_Elmina	436	82	317925
138_E_14August2015_CRC_CapeCoast	890	50	293109
139_E_18August2015_CRC_Tema	97	6	11273
140_E_21August2015_DAA_Winneba	312	89	306505
141_E_24August2015_CEWEFIA_	62	21	13984
142_E_26August2015_CEWEFIA_	169	51	125432
143_E_27August2015_CEWEFIA_Moree	172	56	110869
144_E_1September2015_DAA_Apam	217	46	110932
145_E_2September2015_DAA_Apam	569	149	639051

<b>SFMP Event</b>	<b>Bonacich Power</b>	<b>Degree</b>	<b>Betweenness</b>
146_E_3September2015_SNV_Axim	693	34	205937
147_E_4September2015_SNV_Axim	485	30	116934
148_E_11September2015_DAA_Winneba	188	32	90007
149_E_11September2015_SNV_Warabeba	175	31	75680
150_E_14September2015_FoN_CapeCoast	956	87	532394
151_E_15Sept2015_CEWEFIA_	152	58	234175
152_E_15September2015_FoN_UCC	616	67	203888
153_E_15September2015_HM_Axim	101	48	176652
154_E_15September2015_HM_Takoradi	350	73	369683
155_E_15September2015_HM_Tema	166	73	247267
156_E_18September2015_DAASGIFT_Axim	186	58	174204
157_E_22September2015_HM_CapeCoast	191	62	222471
158_E_22September2015_HM_Keta	3178	77	214439
159_E_19October2015_CRC_Takoradi	160	13	19790
160_E_10November 2015_GITA-FC-UCC_USA	35	14	21831
161_E_10November2015_CRC_Takoradi	129	15	24047
162_E_12November2015_SSG_Accra	378	18	28533
163_E_17November2015_CRC_Accra	290	9	17939
164_E_17November2015_SSG_Accra	357	25	55165
165_E_4December2015_DAA_Winneba	28	10	118024
166_E_8December2015_CRC_East Legon	208	7	12832
167_E_8December2015_DAA_Winneba	389	98	526013
168_E_15December2015_CRC_East Legon	149	10	11104
169_E_16December2015_CEWEFIA_Anlo	289	72	298231
170_E_16December2015_CEWEFIA_AnlogaBeach	234	57	86309
171_E_17December2015_CEWEFIA_Elmina	133	57	158622
172_E_18December2015_CEWEFIA_Moree	7	1	0
173_E_22December2015_SNV_Axim	194	35	215705
174_E_24December2015_DAASGIFT_Axim	39	7	23879
175_E_13January2016_SNV_Anlo	312	60	295870
176_E_14January2016_CRC_Takoradi	124	8	5383
177_E_27January2016_Senegal & Gambia_CRC	93	10	29519
178_E_10February2016	40	15	17285
179_E_10February2016_Shama	106	29	46263
180_E_16February2016_DAA_Winneba	527	22	160537
181_E_17February2016_Axim	95	24	40340
182_E_17February2016_DAASGIFT_Axim	65	26	49272
183_E_17February2016_Shama	64	15	7112
184_E_18February2016_DAASGIFT_Ankobra	35	23	56136
185_E_24February2016_Axim_DAASGIFT	99	25	36978
186_E_24February2016_Fon_Anomabo	99	59	214819
187_E_24February2016_Shama	54	17	20068
188_E_25February2016_DAASGIFT_Ankobra	104	30	31261
189_E_25February2016_FoN_Abandze	101	63	218953
190_E_26February2016_FoN_Biriwa	98	60	223628
191_E_26February2016_HM_Sekondi	33	21	40524

<b>SFMP Event</b>	<b>Bonacich Power</b>	<b>Degree</b>	<b>Betweenness</b>
192_E_29February2016_SNV_CapeCoast	420	26	92853
193_E_2March2016_Daasgift	44	22	45939
194_E_3March2016_East Legon_CEWEFIA	184	14	34956
195_E_3March2016_SFMP	32	22	75765
196_E_8March2016_Anlo_CEWEFIA	160	51	272747
197_E_9March2016_Daasgift	36	16	14297
198_E_10March2016_CEWEFIA_ELMINA	62	21	111999
199_E_11March2016_HM_Ankobra	62	12	60240
200_E_14March2016_CEWEFIA_Moree	100	34	66665
201_E_16March2016_Anlo_CEWEFIA	96	30	171685
202_E_17March2016_DAASGIFT_	97	29	34013
203_E_18March2016_CEWEFIA_Moree	148	50	177076
204_E_21March2016_CEWEFIA_Anlo	75	26	65063
205_E_22March2016_CRC_Dodowa	149	26	65542
206_E_23March2016_DAASGIFT_Axim	61	22	62002
207_E_30March2016_CRC_Aburi	610	43	194055
208_E_30March2016_DAASGIFT_Axim	60	22	33641
209_E_12April2016_CEWEFIA_Elmina	94	50	144668
210_E_12April2016_CRC_Elmina	175	11	4721
211_E_12April2016_FoN_CapeCoast	299	19	61512
212_E_14April2016_DAASGIFT_Shama	94	15	109463
213_E_15April2016_CRC_CapeCoast	221	13	9712
214_E_16April2016_CRC__Elmina	35	9	25992
215_E_16April2016_CRC_Elmina	428	24	129431
216_E_16April2016_CRC_Takoradi	338	17	30248
217_E_20April2016_DAASGIFT_Shama	125	29	21319
218_E_21April2016_DAASGIFT_Ankobra	312	85	153669
219_E_28April2016_DAASGIFT_Axim	305	81	238139
220_E_4May2016_CRC_Takoradi	1126	64	307929
221_E_17May2016_DAASGIFT_EKPOAZO	29	24	85123
222_E_19May2016_DAASGIFT_Axim	142	40	128343
223_E_25May2016_DAASGIFT_Shama	126	28	9512
224_E_2June2016_DAASGIFT_Ankobra	122	34	41437
225_E_2June2016_DAASGIFT_Axim	183	47	89824
226_E_8June2016_DAASGIFT_Shama	122	28	45369
227_E_10June2016_DAASGIFT_Axim	437	127	639021
228_E_5July2016_CEWEFIA_Anlo	199	76	236354
229_E_14July2016_FoN_Jamestown	937	72	261380
230_E_15July2016_CRC_Takoradi	671	44	315174
231_E_29July2016_FoN_Abuesi	366	41	171793
232_E_8August2016_CEWEFIA_Moree	288	112	426856
233_E_9August2016_CEWEFIA_Anlo	109	39	84067
234_E_10August2016_SSG_Accra	199	32	111608
235_E_11August2016_FoN_Keta	1007	14	23376
236_E_23August2016_CEWEFIA_Anlo	119	50	125808
237_E_15August2016_CEWEFIA_Elmina	58	28	98500

<b>SFMP Event</b>	<b>Bonacich Power</b>	<b>Degree</b>	<b>Betweenness</b>
238_E_16August2016_CEWEFIA_Anlo	96	46	61373
239_E_17August2016_CEWEFIA_Moree	85	44	132140
240_E_22August2016_CRC_Accra	331	20	27490
241_E_23August2016_CRC_Accra	342	21	27539
242_E_23August2016_FoN_Takoradi	28	3	3
243_E_24August2016_CEWEFIA_Anlo	111	49	122778
244_E_1September2016_Nungua	13	8	25963
245_E_7September2016_DAASGIFT_Apam	119	30	84559
246_E_13September_2016_CEWEFIA_Elmina	235	92	604620
247_E_20September2016_CEWEFIA_Cape Coast	158	56	276454
248_E_20September2016_DAA_Apam	319	99	364580
249_E_21September2016_SPS_Capecoast	36	8	22258
250_E_23September2016_CEWEFIA_Anlo	55	24	34341

### 3 SFMP participants with 25 highest "betweenness" scores, end of Year 2

External ID	Name	Employer	Job Title	Betweenness score
Kwofie_M	Mary Kwofie		Fish processor	362667
Sasu_L	Lydia Sasu	Development Action Association DAA	Director	326846
Crawford_B	Brian Crawford	CRC University of Rhode Island	Chief of Party, SFMP	307452
Agbogah_K	Kofi Agbogah	Hen Mpoano	Director/ Policy Advisor; SFMP National Program Manager	214122
Asare_A	Abraham Asare	DAA	Project Officer; Monitoring and Evaluation Coordinator	206212
Abaka_Edu_M	Mike Abaka-Edu	Ghana National Canoe Fishermen's Council	Secretary (Western region)	206005
Ofori_Agyei_R	Reynold Ofori-Agyei	DAA	Field Assistant/ Driver	204827
Agbey_S	Sarah Agbey	SNV (Netherlands Development Organisation)	Communications Officer	197490
Akyere_Es	Esi Akyere	National Fish Processors and Traders Association NAFPTA	Fish processor	189540
Arthur_E	Elizabeth Arthur	Fishmonger	Fish processor	181325
Baidoo_J	Joyce Baidoo	National Fish Processors and Traders Association NAFPTA	District Treasurer	179548
Antwi_H	Hannah Antwi	CEWEFIA	Administrative Officer; Communications Officer	163663

Takyi_M	Michael Takyi	CEWEFIA	Business Development Service; Monitoring and evaluation officer; environmental compliance coordinator	163140
Quaye_G	Grace Quaye	National Fish Processors and Traders Association NAFPTA	Fishmonger	153340
Kpedator_W	Wonder Kpedator	Marine Police (Fisheries Enforcement Unit, FEU)	Detective Sergeant	149285
Kaati_J	Jemima Kaati	Shama District Assembly	Development Planning officer	147948
Owusu_Donkor_P	Peter Donkor Owusu	Spatial Solutions	Planner	126809
Mbroba_Dabo_N	Nana Mroba Dabo	Paramount Queen Mother of Anomabo	Queen Mother	118930
Otuteye_D	Diana Otuteye	CEWEFIA	Group leader of Moree Fish Processors	116979
Lazar_N	Najih Lazar	CRC University of Rhode Island	Senior Fisheries Management Advisor	116571
Arthur_V	Veronica Arthur	Ghana National Canoe Fishermen's Council	Fish Processor	115211
Mevuta_D	Donkris Mevuta	Friends of the Nation	Executive Director	110995
Dogbey_R	Rebecca Dogbey	Fish processor	Fish processor	108504
Freeman_T	Theresah Freeman	Fish Processors in Axim	President	108118
Ewusiwa_A	Aba Ewusiwa	Fish processor	Fish processor	106610

#### 4 Full size view of selected graphics

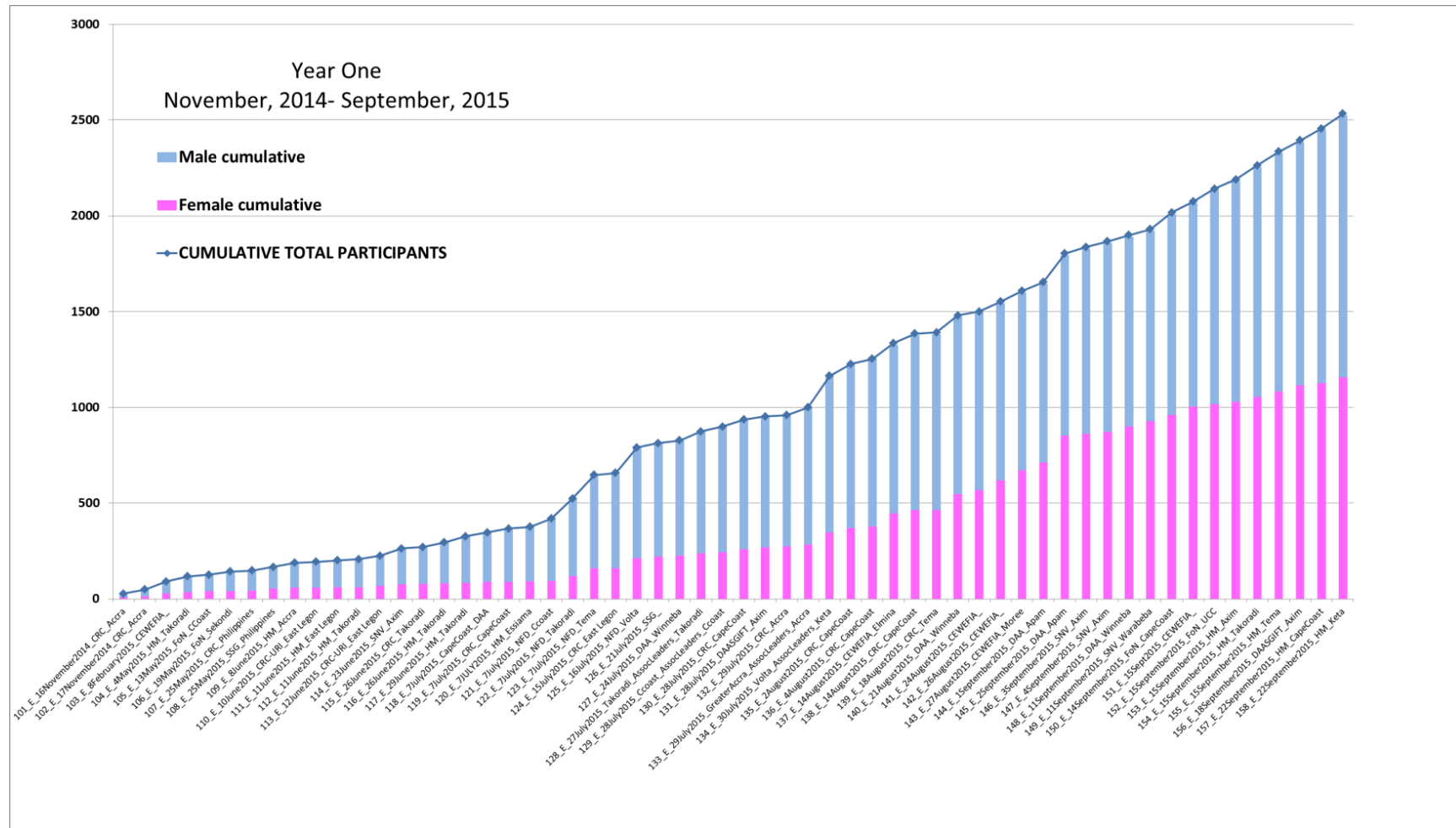
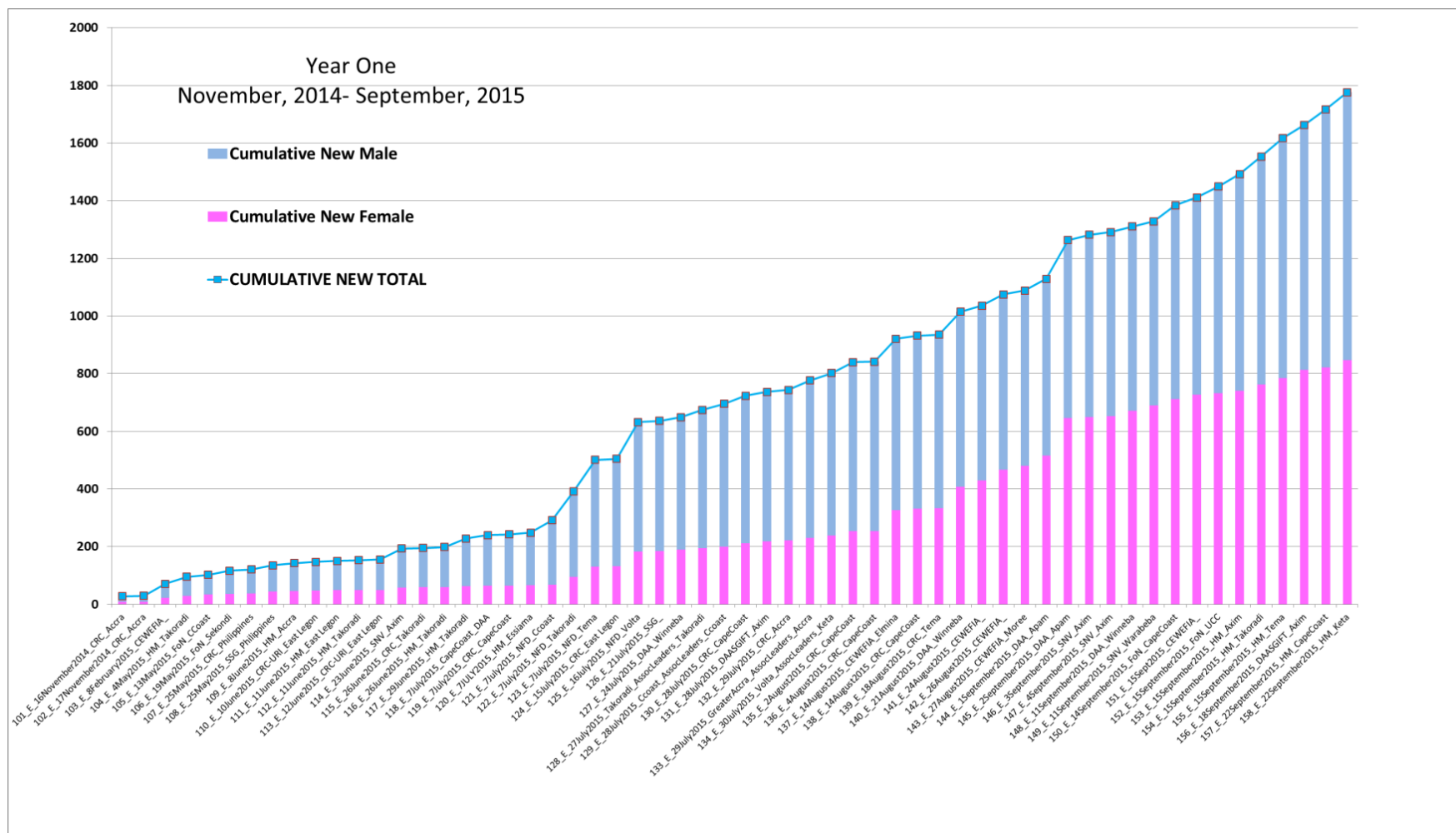


Figure 27 Full Size View of Figure 2: Cumulative number of stakeholders engaged in SFMP events, November, 2014 through September 2015, by gender.

Note: The trends for cumulative involvement through Year 1 is 1,370 men (54.1%) and 1,162 women (45.9%), including project staff and facilitators.



**Figure 28 Full Size View of Figure 3: Cumulative number of new stakeholders engaged in SFMP events, November, 2014 through September 2015, by gender.**

Note: The cumulative proportion of women as new individuals involved with the SFMP has been a few percentage points less than 50 % since nearly the beginning of the project. The number of unique individuals which the SFMP reached through these events was 1,776, including 929 men (52.3%) and 847 (47.7%) women.



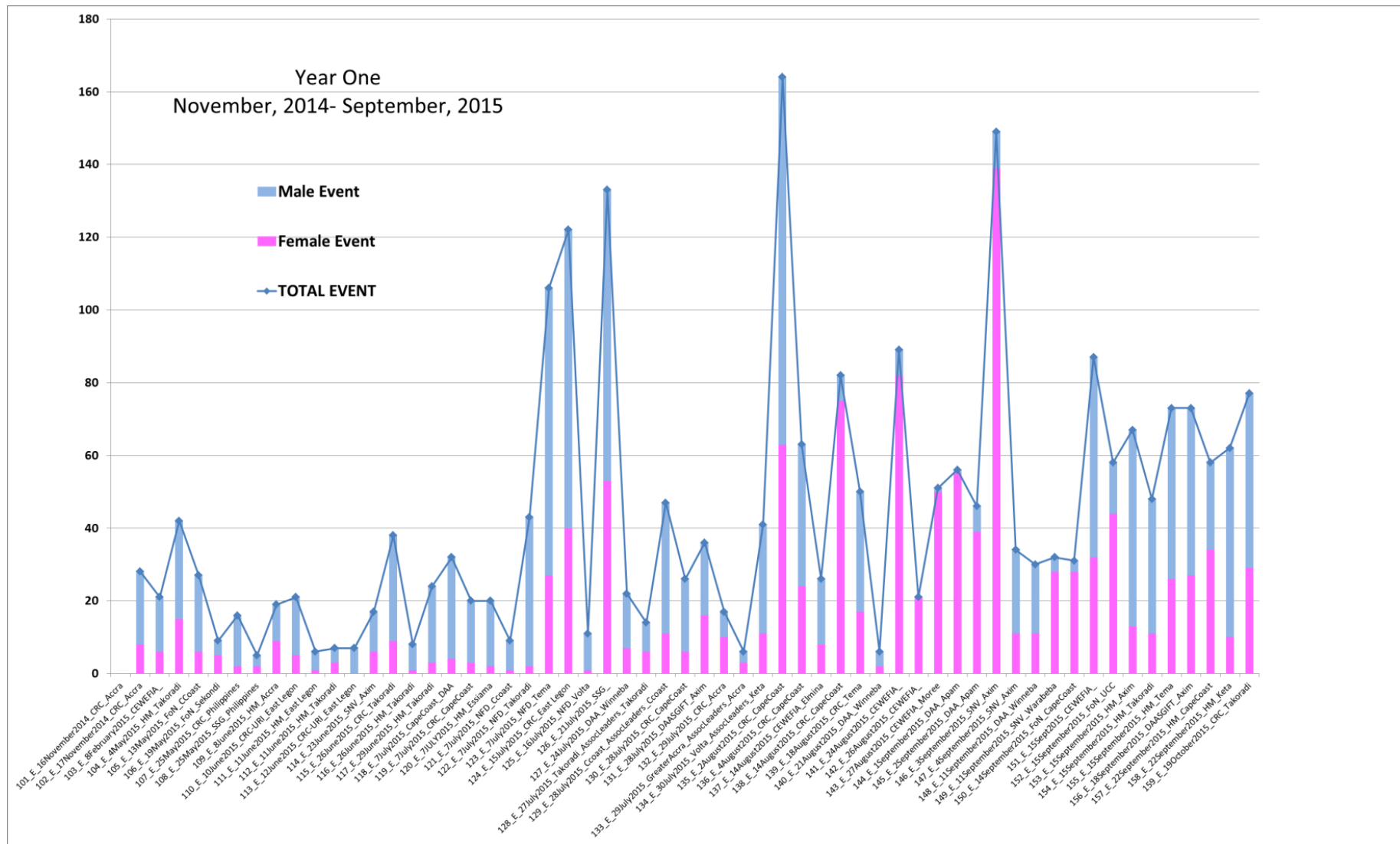


Figure 29 Full size view of Figure 4 Number of men and women participating in each Year 1 event

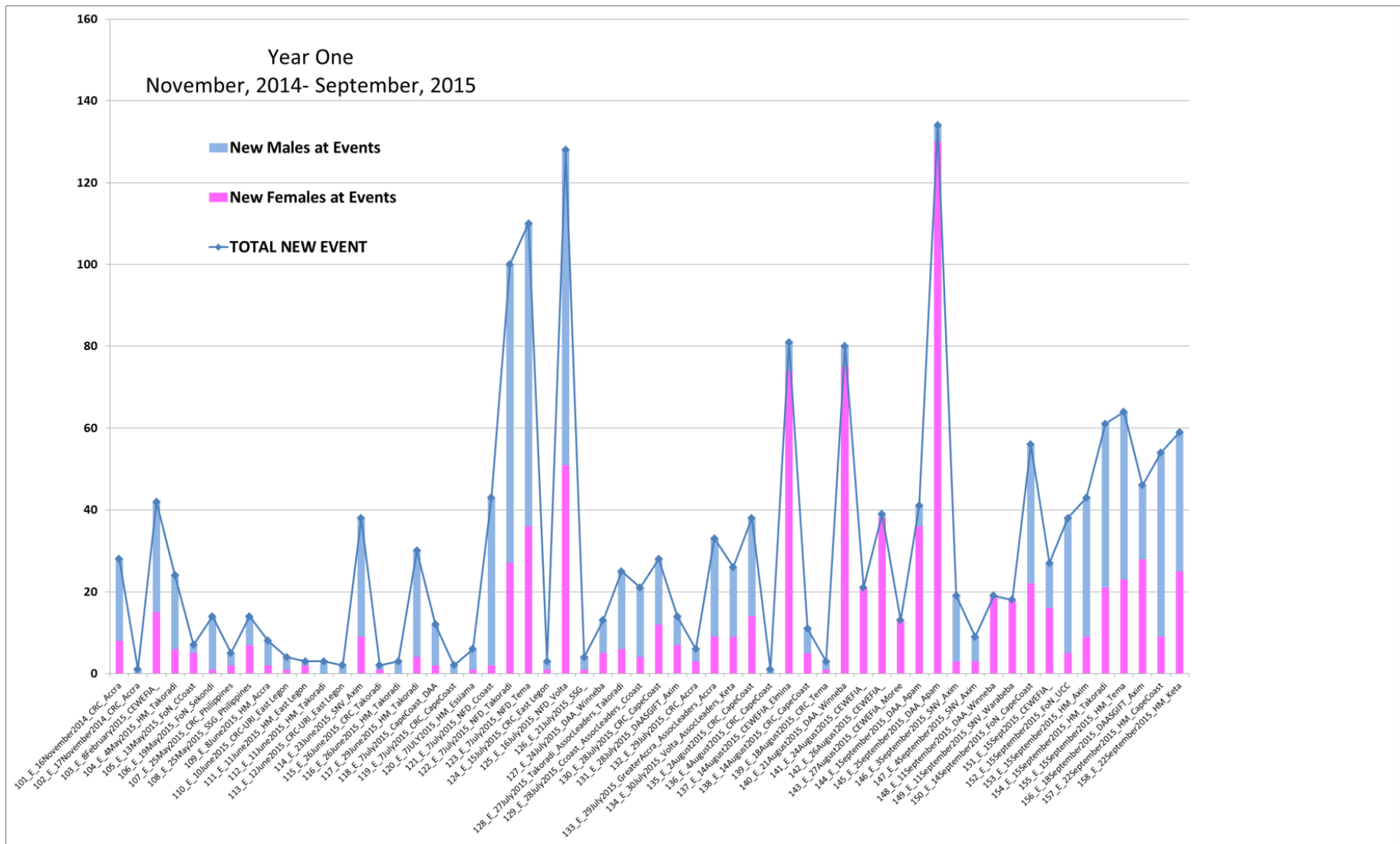


Figure 30 Full size view of Figure 5 Number of new men and women participating in each Year 1 event

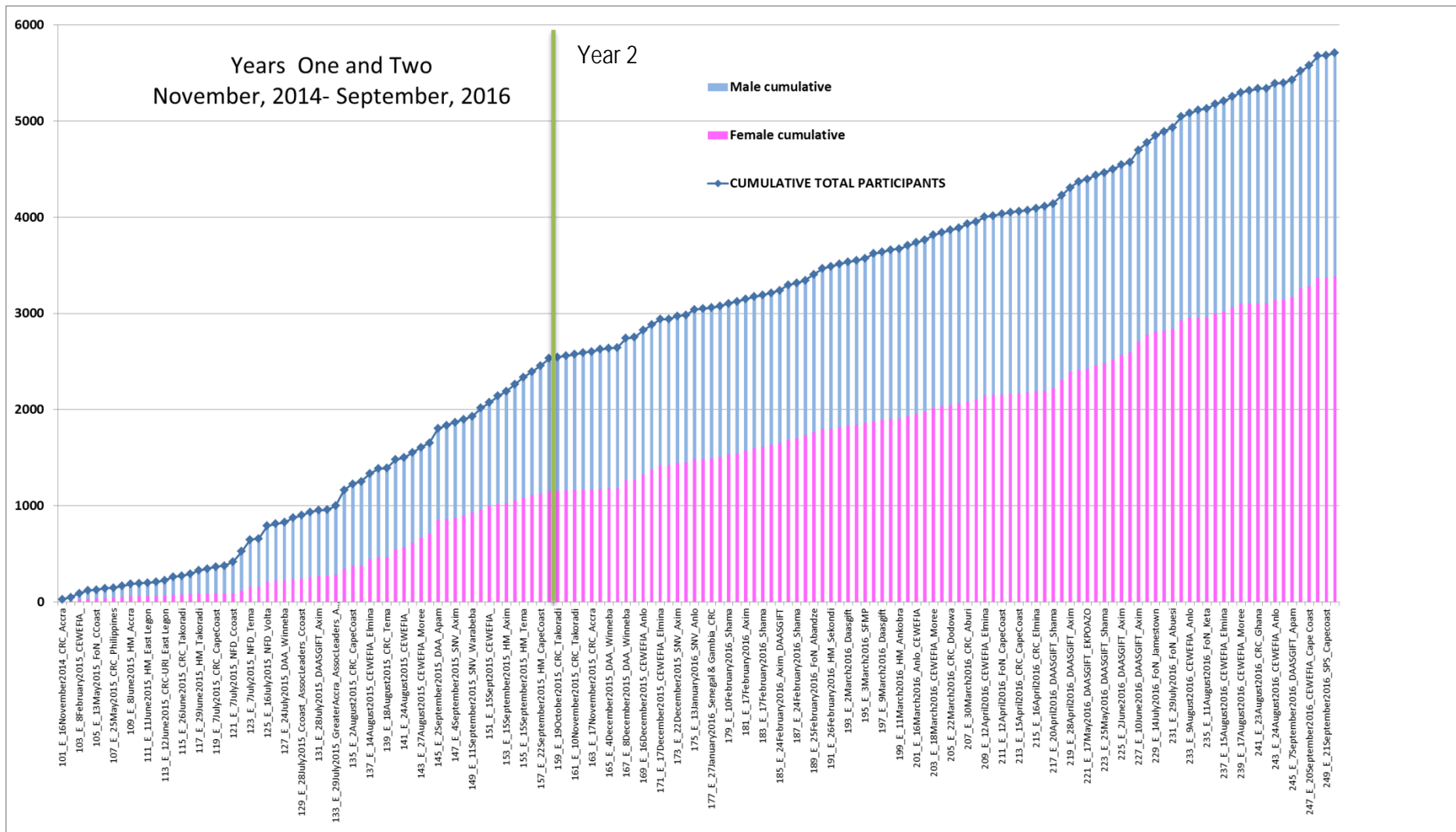


Figure 31 Full size view of Figure 13 Cumulative number of stakeholders engaged in SFMP events, November, 2014 through September 2016, by gender.

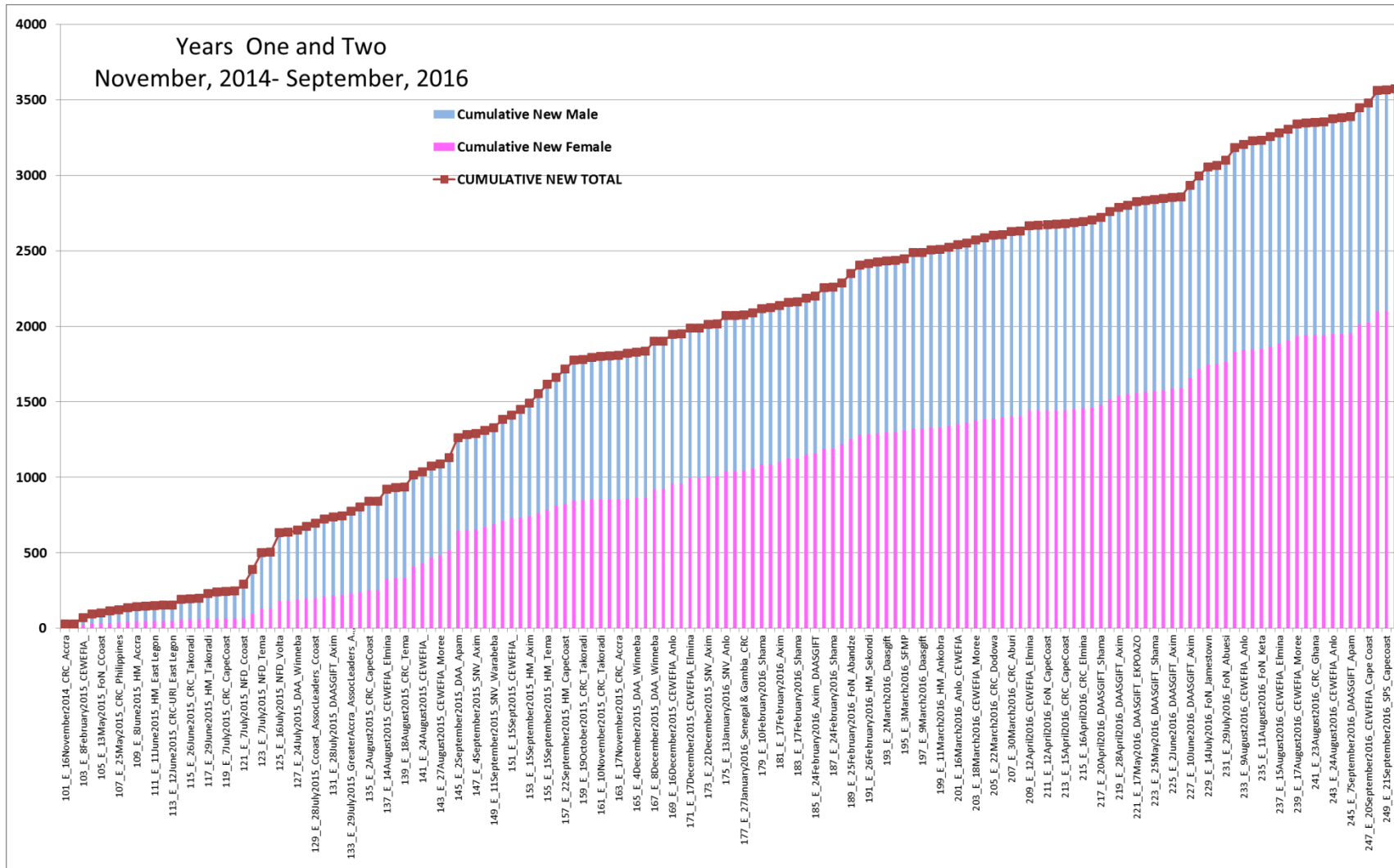


Figure 32 Full size view of Figure 14 Cumulative number of new stakeholders engaged in SFMP events, November, 2014 through September 2016, by gender

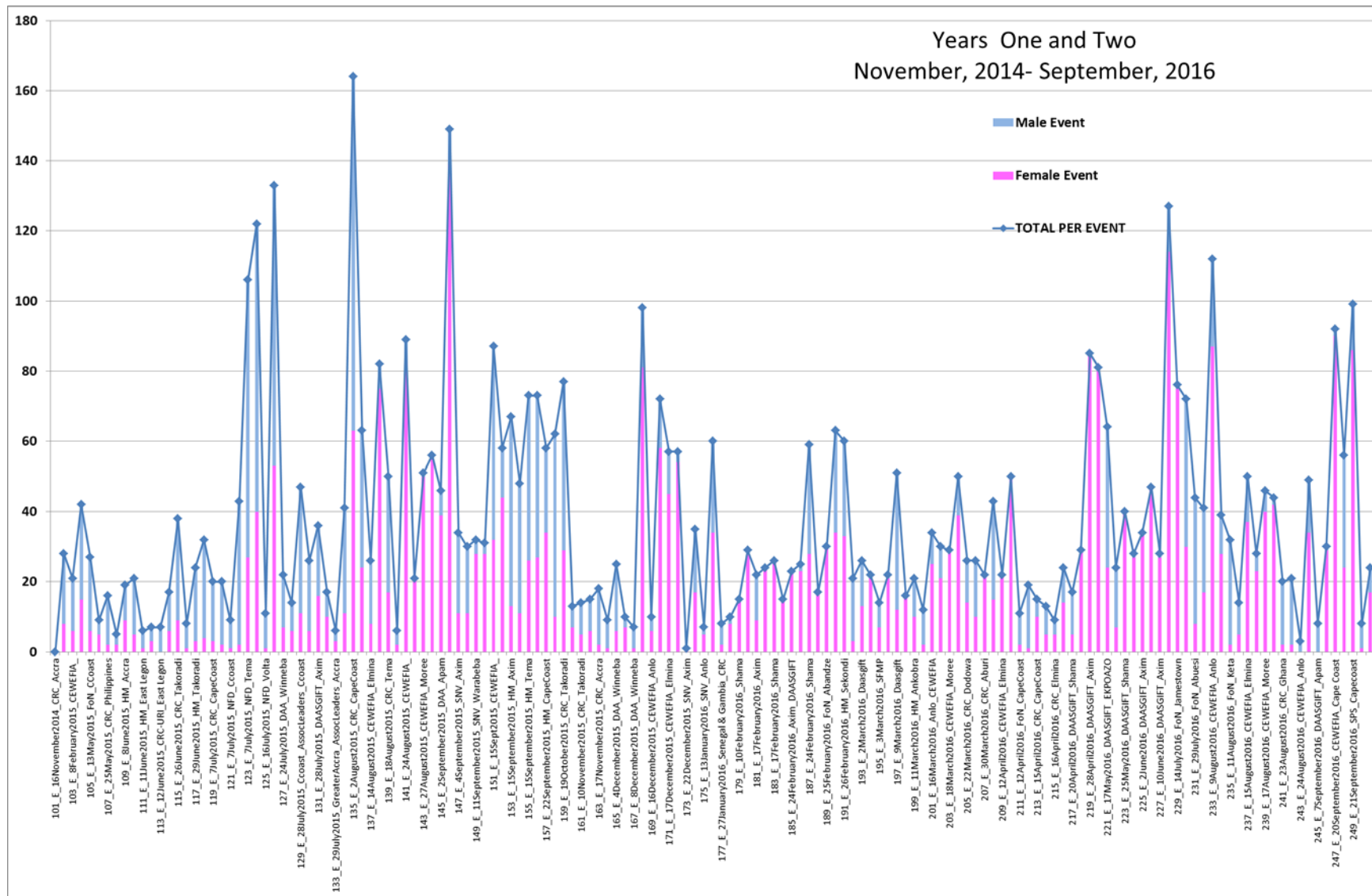


Figure 33 Full size view of Figure 15 Number of men and women participating in each Year 1 and Year 2 event

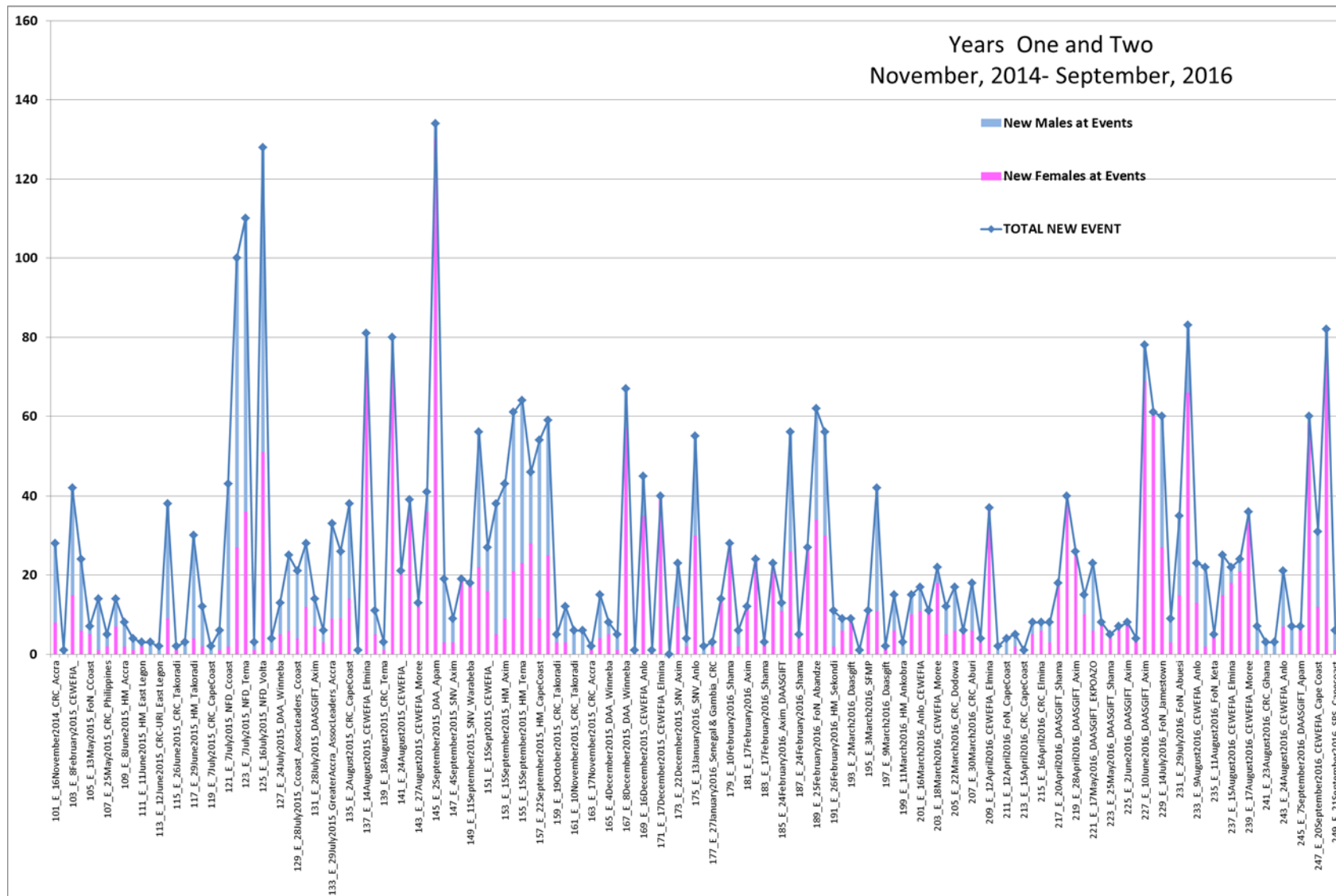
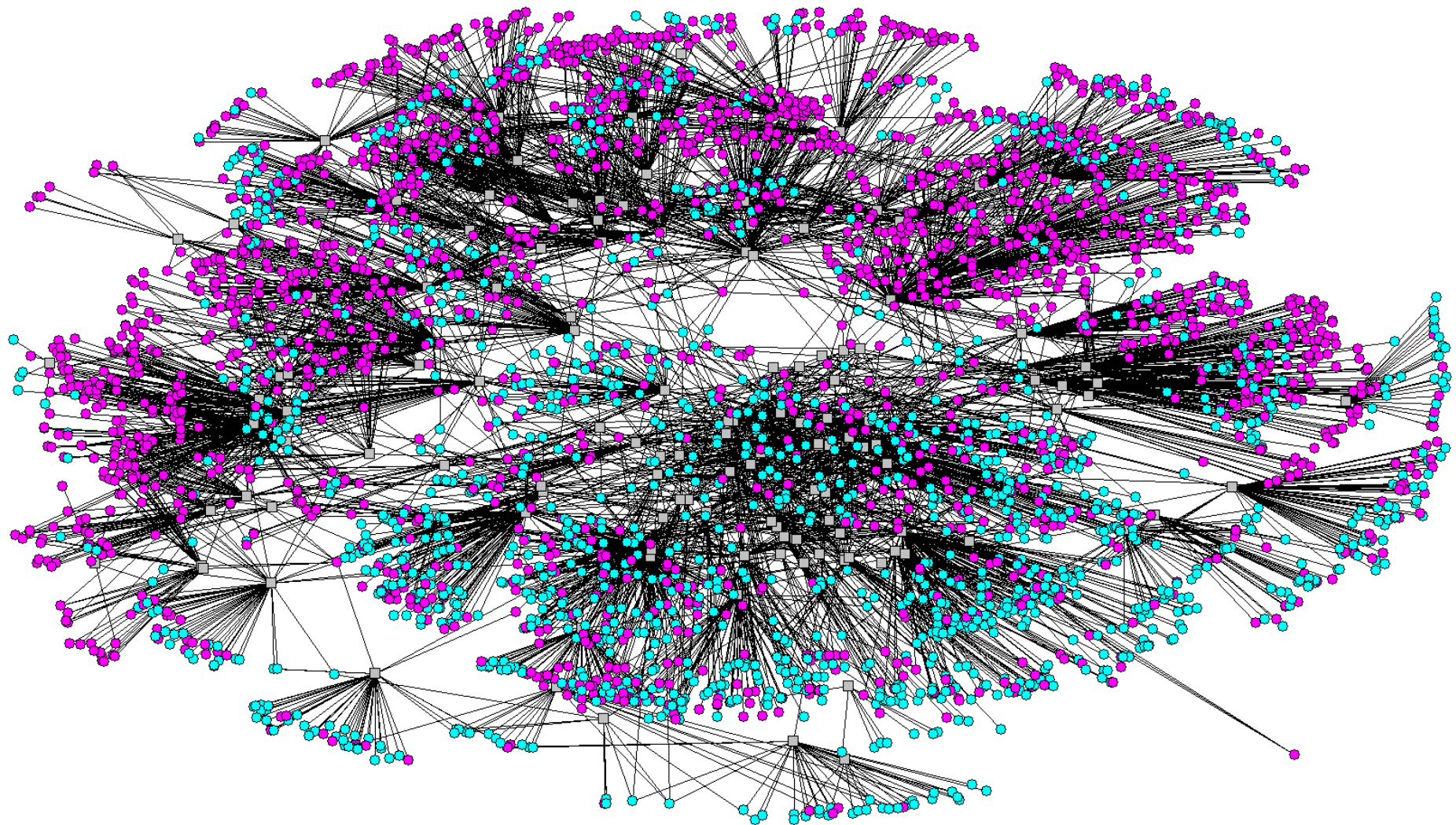
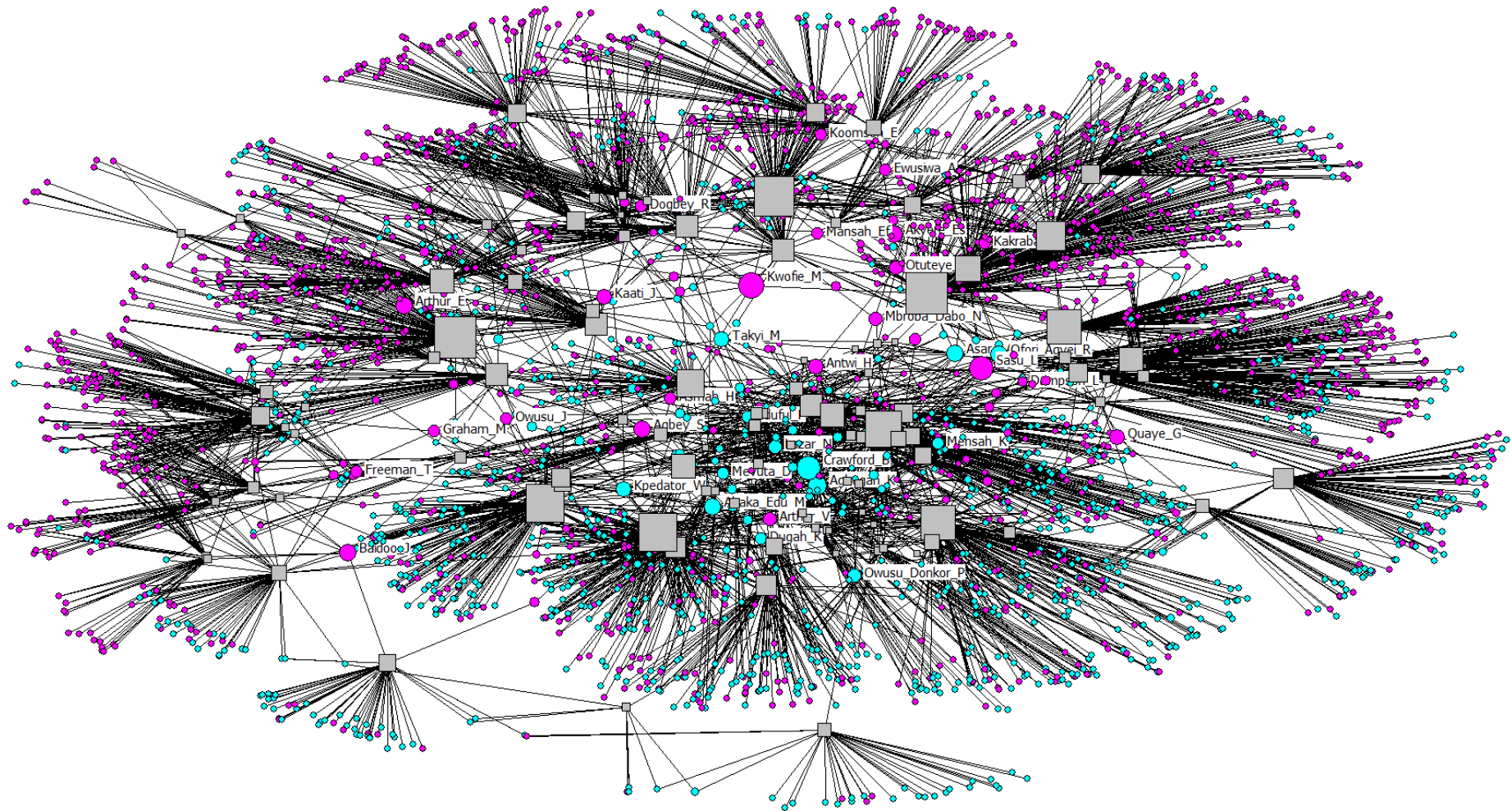


Figure 34 Full view of Figure 16 Number of new men and women participating in each Year 1 and 2 event



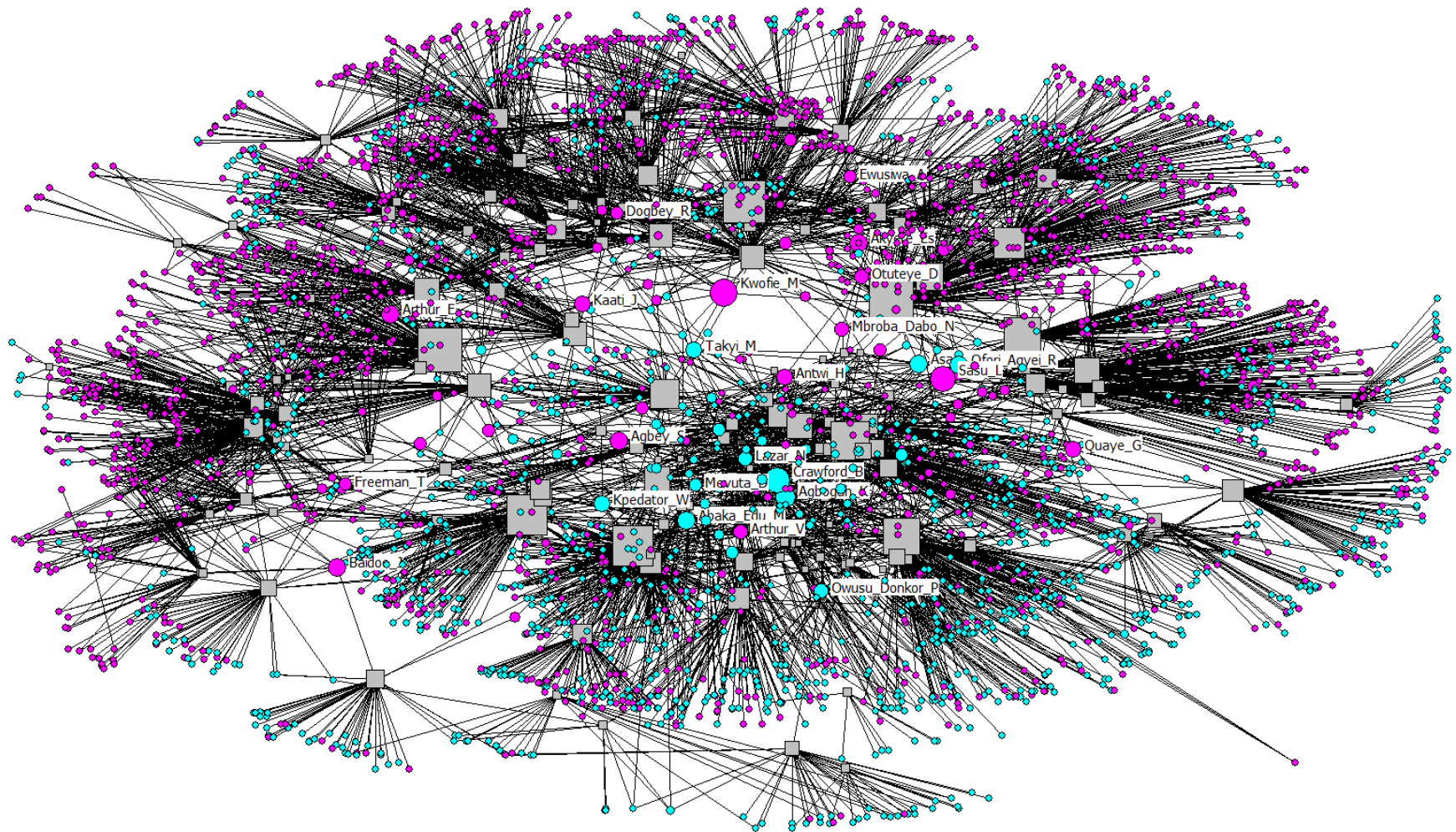
**Figure 35 Full size view of Figure 21 Year 1 and Year 2 SFMP stakeholder network of 3,575 people involved in 150 events**

Key: Pink=women, Blue=men, Grey=events.



**Figure 36 Full size view of Figure 24 The portion of the SFMP network connected by a single degree of separation from the top 25 "betweeners" connecting 3,014 stakeholders**





**Figure 37 Full size view of Figure 25 Complete Year 1 and Year 2 SFMP network, 3,575 event participants**

Key: Pink=women, Blue=men, Grey=events. Dot size is related to importance of individual or event in terms of “betweenness”, the ability to connect to sub-groups within the SFMP network.