

Looking at agricultural innovation platforms through an innovation champion lens

An analysis of three cases in West Africa

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Abstract: *The concept of an innovation platform is increasingly used in interventions inspired by agricultural innovation systems thinking, as a way of bringing stakeholders from a sector together to enable transformative change. An essential role on such innovation platforms is thought to be that of the 'innovation champion', but this role has so far not been unravelled. In this paper, by applying insights from management science to analyse three innovation platforms in West Africa from the Convergence of Sciences – Strengthening Innovation Systems programme (CoS–SIS), different types of innovation champions are mapped. The authors conclude that making a distinction among different types of innovation champions can be useful in identifying members for innovation platforms, but that the specifics of agricultural innovation appear not to be adequately captured by roles attributed to existing categories of innovation champions. Further research is needed to ascertain whether other categories exist, and how different innovation champions interact over time on agricultural innovation platforms.*

Keywords: *innovation platforms; agricultural innovation systems; CoS–SIS; Ghana; Benin*

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In recent years it has been recognized that innovation is a systemic affair that requires the involvement of the different types of actors active in so-called agricultural innovation systems (AIS) (Sulaiman and Hall, 2002; Sumberg, 2005; Lenné, 2008; Chave *et al.*, 2012). These include farmers, researchers, policy makers, traders, processors, retailers and civic society organizations. In order to foster innovation, the AIS literature stresses the need for effective interactions amongst these actors in order to collaborate in support networks that aim to advance an innovation, and also to enable negotiation between these support networks and the broader institutional environment in which they are embedded, as innovation is about changing the status quo, and technical and institutional change often meets resistance from incumbent actors (Klerkx *et al.*, 2010; Chave *et al.*, 2012; Hounkonnou *et al.*, 2012).

As an intervention to optimize the interaction in AIS, particularly in Sub-Saharan Africa, the literature increasingly points to the importance of so-called 'innovation platforms', in which all key actors from a sector or a geographical location (territory, watershed, province) are convened (Ayele *et al.*, 2012; Hounkonnou *et al.*, 2012). Innovation platforms constitute a deliberate intervention to create a support network that can foster an effective combination of technical, social, economic and institutional innovations (Kilelu *et al.*, 2013). The existing studies on innovation platforms mostly analyse innovation platform management and facilitation, as well as impact (Abate *et al.*, 2011; Ngwenya and Hagmann, 2011; Adekunle and Fatunbi, 2012; Ayele *et al.*, 2012; Hounkonnou *et al.*, 2012; Nederlof and Pyburn, 2012). Several of these studies highlight the importance of having actors on the innovation platform who take the role of a 'champion' (Ngwenya and Hagmann, 2011; Nederlof and Pyburn, 2012), implying that these actors put in an above-average amount of energy and determination to make the innovation succeed. Elsewhere in the agricultural innovation literature, in work that does not specifically analyse innovation platforms, the

crucial roles of such champions has been recognized in overcoming technological barriers by, for example, resolving flaws in new technologies and socio-institutional barriers by, for example, mobilizing support for an innovation or overcoming resistance to change (Klerkx *et al.*, 2010; Probst *et al.*, 2012).

Despite noting the importance of champions in innovation platforms, much of the agricultural innovation literature does not further analyse the roles and types of champions and their contributions. This article aims to fill this gap by analysing three innovation platforms in West Africa (Ghana and Benin) through an 'innovation champion lens', thereby offering an analytical concept that can sharpen analysis and support the management of innovation platforms. In so doing, we draw on the well developed literature on innovation champions from the management sciences. Before describing and analysing the several innovation platforms we studied, we outline the conceptual framework that has informed our analysis.

Conceptual framework

Innovation champions have been defined as 'individuals who informally emerge [...] and make a decisive contribution to the innovation by actively and enthusiastically promoting its progress through the critical stages' (Howell *et al.*, 2005). Innovation champions are key in removing the several barriers that emerge in innovation processes, such as lacking resources, opposition of incumbent actors, rigidity of established structures, and network coordination problems (Fichter, 2009). Champion roles were first identified in the intra-organizational context of large firms, but given the increase in collaborative innovation processes, innovation champions are now seen to be located at different places in multi-organizational innovation networks (Gupta *et al.*, 2006; Fichter, 2009). Innovation champions can thus include actors from different parts of the innovation system: they may come from the different companies involved in the value chain; they can be

Table 1. Summary of the different types of innovation champion, the activities they perform, the types of barriers they tackle and their power base.

Innovation champion type	Activities	Barrier type	Power base
Technology champion (also called 'expert champion')	Inventor of technology or an expert who wishes to advance a technology and advocates it.	Technological barriers	Knowledge speciality Technological expertise
Power champion (sometimes called the 'godfather' of innovation)	Sponsor and supporter of the innovation by exerting social and political effort to mobilize support. The godfather is a very high-level person with limited involvement, but who is very powerful (such as a CEO).	Institutional barriers: ignorance, opposition, lack of resources	Hierarchical potential, control of resources
Process champion	Fulfils a key role in creating a receptive environment in the firm by linking the technology champion and the power champion through translating 'technology language' into 'business language', turning an idea into a plan of action.	Institutional barriers: administrative, bureaucratic	Procedural know-how, communication skills
Network champion (also called 'relationship champion')	Fulfils a bridging and brokerage role between already connected and previously disconnected organizations.	Organizational barriers: cooperation, dependency	Networking and communication competence

Sources: Klerkx and Aarts (2013), who adapted Fichter (2009) with the use of Hauschildt and Kirchmann (2001), Gupta *et al.* (2006) and Smith (2007).

consultants and facilitators; and they can also be policy makers (Fichter, 2009; Hermans *et al.*, 2013).

In the literature on innovation champions, a distinction is made between four types of champions (Hauschildt and Kirchmann, 2001; Howell *et al.*, 2005; Gupta *et al.*, 2006; Smith, 2007): (i) the power champion, (ii) the technology champion, (iii) the process champion, and (iv) the network or relationship champion (Table 1). These champion roles can sometimes also be unified in one person (Fichter, 2009).

To promote an innovation process effectively, innovation champions need to collaborate as a team (Hauschildt and Kirchmann, 2001; Fichter, 2009). Innovation platforms are intended to promote innovation and to include key individuals who are able to induce change (Nederlof *et al.*, 2011), and hence it is hypothesized that such teams of champions will be present. Here we study three innovation platforms established through the Convergence of Sciences – Strengthening Innovation Systems (CoS–SIS) programme, an action research programme in West Africa that has established innovation platforms called Concertation and Innovation Groups (CIGs) in the programme. These CIGs aim to achieve institutional change by bringing together actors with a stake in a sector or topic and with a higher than local reach. Later in the paper, we analyse the different champions on each platform to develop ideas about the value of a multiple-

champion framework for agricultural innovation and development projects using an innovation platform approach.

Research methods

We present a comparative case study of three CIGs from West Africa that form part of the CoS–SIS programme (see Hounkonnou *et al.*, 2012; Röling *et al.*, 2012). A total of nine CIGs were set up by the CoS–SIS programme (in Ghana, Benin and Mali – see Nederlof *et al.*, 2012 for an overview). As Hounkonnou *et al.* (2012) and Röling *et al.* (2012) noted, beyond technical problems at the farm level, such as crop and pest management, key constraints in advancing the position of smallholders in these sectors are connected to the formal and informal institutional arrangements they are embedded in, for example, input markets, subsidy schemes, land tenure laws and international supply chains. Hence, in all three cases, the CoS–SIS programme induced CIGs that aimed to foster above farm-level institutional change (for example, in regulations, by-laws, policies, interaction patterns in the value chain) to create a conducive environment for farm-level innovation that also often concerns several technical innovations. The three cases studied (two from Ghana and one from Benin) were selected because these are connected to important

Table 2. Main issues addressed by the CIGs operating in the oil palm and cocoa sectors in Ghana and the rice sector in Benin, and the participants of the three CIGs.

Case	Main issues addressed by CIGs	CIG participants
Oil palm sector, Ghana	Focus on improving oil processing procedure and quality of palm oil to reduce negative environmental and health impacts and gain access to export markets. The CIG aims to: <ul style="list-style-type: none"> • improve the quality of palm oil related to free fatty acid content; • improve access to international markets for small-scale processors; and • reduce environmentally unfriendly processing practices of small-scale processors (such as burning lorry tyres as an energy source). 	Smallholder farmers, small-scale processors, mill owners, scientists, the Ministry of Food and Agriculture (MoFA), Ghana Export Promotion Authority (GEPA), Ghana Standards Authority (GSA), Ghana Regional Appropriate Technology Industrial Service (GRATIS), the Kwaebibrim District Assembly and the Environmental Protection Agency (EPA)
Cocoa sector, Ghana	Focus on enhancing an equitable value chain with good information access for smallholders. The CIG aims to: <ul style="list-style-type: none"> • ensure there is transparency in fixing the cocoa price in Ghana; • ensure that the pricing of cocoa is based on returns on investment rather than a percentage of the net free-on-board (FOB) price; and • ensure aggregated price incentives for all cocoa farmers. 	Cocoa–Coffee–Sheanut Farmer Association and related cocoa input company; farmer-based marketing company Kuapa Kokoo; the Ghana Cocoa Board (CoCoBod) with representatives of its Research Institute CRIG and Quality Control Company officers at national and regional level; researcher of Ghana Standards Authority; and the adviser of the Minister of Finance and Economics
Rice sector, Benin	Focus on various institutional problems affecting rice production and marketing in the areas served by irrigation schemes: water management, fertilizer availability, and relationships between rice producers and traders. The CIG aims to: <ul style="list-style-type: none"> • change the rules and practices governing the maintenance of irrigation facilities; • improve the input supply by state agents; • make rice marketing systems more favourable for smallholders (price structure and power relations between rice producers and traders); and • change the rigidity of formal rules for accessing and repaying credit. 	Rice producers and vegetable growers: representatives of the rice growers' farmer-based organization belonging to the three rice production sites, representative of rice traders at district level and the town council of Zagnanado district, service providers such as those responsible for the district extension service (Centre Communale pour la Promotion Agricole – CeCPA), representative of credit supplier structure at district level (Caisse Local de Crédit Agricole et Mutuel – CLCAM), representative of rice growers' national network (Cadre de Concertation des Riziculteurs du Bénin – CCR-B), representative of department-level rice growers' association (Union National des Riziculteurs du Zou – UNIRIZ) and government agency in charge of the rice processing factories (Société Nationale pour la Promotion Agricole – SONAPRA).

Table 3. The different champions in the oil palm CIG in Ghana.

CIG action to address institutional constraints	Barrier(s) to be overcome	Activities undertaken to address the barrier	Position of the champion	Role played by the champion in overcoming the barrier
Changing rules governing processing of palm fruits to reduce use of environmentally unfriendly practices for processing	Institutional/ administrative barrier	Lobbying traditional authorities and district legislature to enact by-laws, rules to ban the use of lorry tyres	The Presiding Member of the Kwaebibrem District Assembly – not in the CIG	As a power champion, he used the power or influence he had as the presiding member to organize a meeting for the CIG to interact with the Executives of the Assembly. He also granted the CIG a space in the Assembly's First Sitting for the year for some of the CIG members to interact with the General Assembly and to share information on the adverse effects of bad processing practices on the quality of the oil and people's health.
Changing rules governing processing practices to reduce use of environmentally unfriendly practices for processing palm fruits	Institutional/ administrative barrier	Lobbying traditional authorities, the District Legislature to enact by-laws to ban the use of lorry tyres. Sharing information on the adverse effect of bad processing practices on oil quality and people's health with actors along the value chain	District Director of Agriculture, Kwaebibrem district	As a network and process champion, he linked the CIG to the traditional authorities and the presiding member of the District Assembly to lobby them in order to make the traditional authority and the District Assembly grant an audience to the CIG. This champion also organized the actors along the palm oil value chain for the CIG to interact with them and share information on the adverse effects of bad processing practices on the quality of the oil and people's health.
Coming up with and creating awareness of alternative sources of fuel to that of lorry tyres among processors and other actors	Technology barrier Information barrier	Suggesting alternative source and lobbying processors to accept the alternatives, convincing processors through economic analysis	An experienced and expert processor, member of the District Assembly	As a technology champion, based on her experience, she came up with an alternative source of fuel (fibre cake from processed fruits). Initially, processors opposed it, but she was able to convince them with an economic analysis and challenged a few of the processors to try it and report back to their colleagues. She sold the idea to her colleague processors at several forums, including the District Assembly meetings.
Linking processors to remunerative markets to provide an incentive to increase quality	Cooperation barrier	Exploring market for good-quality crude palm oil and sharing market information with processors	District Director of Agriculture, Kwaebibrem district	As a network champion, through her network she interacted with some buyers who needed large quantities of good-quality crude palm oil for export and informed the CIG about it.

sectors in the countries involved: cocoa is a key export crop for Ghana (Quarmin *et al.*, 2012); oil palm is a key strategic pillar of agricultural and industry-led growth for poverty reduction in Ghana because of its potential to provide income for many rural smallholders (Osei-Amponsah *et al.*, 2012); and the rice sector in Benin is a key strategic sector to develop smallholder agriculture in that country (Ministry of Agriculture, Livestock and Fisheries, 2011). Given their strategic interest and sectoral scope, the selected CIGs covered a wide range of actors from the AIS (such as farmers, policy makers, sector representatives, processors, research and extension organizations) across different geographical and administrative levels and positions in the value chain, and hence we expected these cases to provide a sufficiently broad network of actors for the different types of champions to be present.

Following Hoholm and Araujo (2011), the findings in this study are based on a longitudinal and in-depth tracking of developments in the studied cases by some of the authors (each domain had one action researcher appointed, the Research Associate, who also acted as facilitator of the CIG) – thus producing an 'innovation ethnography'. An events analysis was completed between 2010 and 2012 (Van de Ven *et al.*, 1999) to assess how different actors contributed to advancing the innovation process through critical

stages. The data for this analysis were acquired through regular informal interviews with CIG participants (three per year on average, with CIG participants from the different participant categories listed in Table 1) and observations by the researchers at monthly platform meetings, analysis of records and minutes of all platform meetings, as well as workshops in which members of the platforms were invited to reflect on the performance of the platform. To ensure rigorous analysis, a data recording protocol was followed, describing in detail at regular intervals the key events, what produced these events and what further developments they triggered, and the role of different actors in the events. This produced a rich and detailed description of the process, from which the championing activity could be clearly distilled. While case study methodology generally does not allow for statistical generalization, it does allow for analytical generalization: that is, using previously developed theory as a template for reflection (Yin, 2003).

Key findings

Background: three cases of agricultural innovation from West Africa

Table 2 summarizes the cases (see also Hounkonnou *et al.*,

Table 4. The different champions in the cocoa CIG in Ghana.

Action of CIG to address institutional constraints	Barrier(s) to be overcome	Activities undertaken to address the barrier	Position of the champion	Role played by the champion in overcoming the barrier
Inadequate information on formula for determination of free-on-board method of pricing in cocoa	Information barrier	Creating transparency in the pricing of cocoa by improving information.	Policy Adviser ^a to the Minister of Finance & Economic Planning	Network and process champion who linked up those who had information with those who did not: delving to provide information on FOB pricing of cocoa, based on authority and position at the Ministry and as senior staff at COCOBOD.
Low producer price of cocoa for small-holder cocoa farmers and limited influence on price-setting body	Cooperation barrier	Lobby key government policy on price just before the price announcement.	Director of Research, COCOBOD ^a (formerly Policy Adviser on Cocoa to the Minister for Finance & Economic Planning)	Process champion who established some trust and confidence that made the Minister consult his views. His authority/influence as a CIG member as well as his position granted him access to the Minister.
Inadequate information on pricing methods for small-holder cocoa farmers in neighbouring countries of Ivory Coast and Cameroon	Information barrier	Developing alternative pricing system for cocoa by using other available systems.	Bean warehouse Manager, CARGILL	Process and network champion by virtue of position in CARGILL. He managed to link those with information in the Ivory Coast and the Cameroons – networking with CARGILL's sister offices in the Ivory Coast and the Cameroons for cocoa pricing systems in those countries.
Unavailability of approved pesticides on the open market	Administrative barriers and coordination barriers	Creating transparency and support to the private sector in input supply and distribution. Lobbying and negotiation with the Chief Executive Officer of COCOBOD to take measures to support the private sector in input distribution in the country.	Managing Director of the farmer-owned Cocoa Input Company; influence and backing of the Cocoa Coffee and Sheanut Farmers' Association	Network and process champion who used his influence and position to talk to the Chief Executive Officer of COCOBOD.
Dealing with information asymmetry in government cocoa input distribution	Information barrier	Farmers to know timing and quantity of input allocation to their various communities. Resource person invited to provide information to the CIG; he later became a member of CIG. Power of information and position as former National Hi-Tech Coordinator used to negotiate with people at CODAPEC/ COCOBOD.	Former National Coordinator of the Cocoa Hi-Tech Programme	Power champion who by position, authority and access to information and contact with relevant persons in authority could make a difference in the functioning/ performance of the CIG.
Bringing up hearing the voice of the 'voiceless' (that is, smallholder farmers)	Administrative barrier	The producer price needed to be increased, so adjustments were made in the budget estimates for inputs to allow for an increase in the producer price of cocoa	Paramount Chief of the Agona Nyarkrom Traditional area	Power and network champion. He supported the innovation by gathering information on the impact of low producer price of cocoa, high input cost, inflation and depreciation of the currency. His concerns were brought up with the CIG, and subsequently passed on to the Producer Price Review Committee. He also brought the issue to the attention of the President of the Republic of Ghana when the latter visited his Traditional Area in September 2012.

Table 4 continued overleaf

Table 4. *Continued*

Action of CIG to address institutional constraints	Barrier(s) to be overcome	Activities undertaken to address the barrier	Position of the champion	Role played by the champion in overcoming the barrier
Proposal to revert to cocoa pricing based on cost of investment rather than a percentage of FOB	Administrative barrier	Changing the formal rule of fixing producer price based on percentage of FOB to pricing based on cost of investment.	Present adviser of the Ministry of Finance and Economics comes from the cocoa processing industry	As a network champion, he provided policy information that both the FOB pricing policy and Cocoa Diseases and Pests Control (CODAPEC) programme were no longer sustainable. He also did networking to link CIG to the national stakeholder platform under the auspices of the African Cocoa Initiative and the World Cocoa Foundation. He employed an advocacy role to make COCOBOD promote cocoa as a health food and a promotion for a cocoa drink to be included in the national school feeding programme, hence stimulating local demand.
	Coordination barrier	Linking the CIG to the national stakeholder platform of the African Cocoa Initiative. Promotion of local utilization of cocoa.		

^aThis refers to the same person in subsequent positions.

2012; Röling *et al*, 2012; and Nederlof *et al*, 2012 for more detail on the specific cases and issues addressed). From Table 2 it emerges that several issues needed to be addressed, for which it was necessary to make connections with different kinds of actors in the value chain and at the policy level, and undertake lobbying activities to obtain the necessary support. Here there was a crucial role for several kinds of champions, as we highlight below.

Champions in the three CIGs

As indicated in the conceptual framework, innovation champions usually emerge informally. Clearly, since the CIGs were set up externally, in our cases their emergence was not fully informal, and in some cases they were even appointed to a certain role (for example, in the Ghana cocoa case) and given a certain task. On all platforms, people were selected on the basis of a genuine interest in enabling change, and not merely to be remunerated with per diem expenses. Although actors were sought who were able to contribute positively to the innovation process, there was no certainty beforehand as to who within the CIG would actually act as a champion and in what way. Effectively, not all actors in the CIG acted as champions, but we observed various actors play a more active role and put more energy into overcoming a certain barrier. Sometimes people not active in the CIG, but close to it, acted as champions too. Some of the championing is only to remove a specific barrier and hence is only relevant for a short period, while some champions play a key role for an extended period.

Tables 3, 4 and 5 present an overview of the champion activity in each of the three CIGs studied (Ghana Oil Palm, Ghana Cocoa and Benin Rice respectively).

Cross-case analysis

While the organizational affiliation of the champions presented in Table 3 is of course linked to the specific case with which they are connected, a number of cross-cutting observations can be made. First, many of the champions have high-level positions, and because of this, have the power to enable change. Their willingness to enable change came about because the interaction in the CIG

convinced them that it was important to change the existing structures: this awareness is built into the CIG; CIG members were recruited for their potential as change agents; and the synergy in actually enabling change was in many cases the result of actors in a sector coming together for the first time to discuss barriers to innovation for smallholders.

Second, there is value in the different champions in the CIG targeting different institutional interfaces, sometimes one person combining several champion roles. This is also related to holding different positions, such as the Director of the Ghana Cocoa Board in the Ghana cocoa case, who formerly acted as a policy adviser to the Minister. Having the CIG as a central meeting place where all champions come together ensures an appropriate, coordinated and timely contribution from different champions to the change process and overall goals of the CIG. This is facilitated by a dedicated networking and process champion who is present in all CIGs: the Research Associate, who acts as a platform facilitator.

Third, while the different types of champions and barriers as defined by the literature can be observed, the nature of the barriers addressed can vary greatly depending on the specific issues the CIG needs to address. The barriers addressed in smallholder agricultural innovation do not neatly fit the barriers encountered in industrial innovation in non-agricultural businesses: hence the focus of the activities in Table 1 needs to be adapted to the specifics of smallholder innovation, which is often at a sector level rather than a firm level. While the activities of the technology champion and the network champion are quite similar, the activities of the power champion and the process champion are much more concerned with political lobbying among sectoral and national decision makers, since agricultural innovation requires regulatory and institutional change at multiple places throughout the value chain and the governance system (following Hounkonnou *et al*, 2012). An additional barrier that was often identified was the information barrier (lacking information, or having false or incomplete information), and this required actions by power or network champions to urge the improvement

Table 5. The different champions in the rice CIG in Benin.

Action of CIG to address institutional constraints	Barrier(s) to be overcome	Activities undertaken to address the barrier	Position of the champion	Role played by the champion in overcoming the barrier
Lobbying to induce collective action for frequently cleaning the irrigation canal, as rice growers' organizations did not follow rules for water use in the rice field	Administrative barrier/ignorance barrier	Improving management of rice growers' organizations and quality of extension service provided. Setting of rules for cleaning the canals (each farmer had to spend two days a year cleaning the main canals at the start of the wet season). Monitoring progress by the CIG.	The extension officer (the District Chief Extension Officer – Responsable Communal pour la Promotion Agricole – RCPA, Togla I)	As a network/process champion, he created trust among actors in the discussion on obeying the water management rules. As a technology champion, based on his expertise, he played a crucial role in input distribution and giving advice on microfinance services and dissemination of technologies.
Formalize informal contract arrangements between traders and rice growers to counteract improper rice market structure and complaints from farmers about price arrangements with traders locally named <i>Dadjè</i>	Cooperation barrier	Reorganizing rice market structure. Information sharing on existing market opportunities (contact with SONAPRA government agency in charge of the rice processing factories, learning from successful experience case of the ESOP). Linking the activities of the CIG with the CCR-B.	The first Vice-Mayor of Zagnanado municipality. President of the Cadre de Concertation des Riziculteurs du Bénin (CCR-B)	Based on his good communication skills, he organized the negotiation process with SONAPRA, acting as a process champion; information sharing with the town council members about CIG activities and opportunities of the CIG for local development on the valorization of the local rice. Based on his control of resources as president of the CCR-B, he acted as a power champion. He gave CIG members access to resources through the CCR-B. Given the experience of CCR-B in partnerships with some European Union projects, he could facilitate access for rice producers to technological packages (rice processing, added value to the local rice by providing package, parboiled rice, etc...), acting as a network champion.
Counteract the absence of formal contracts and regulations between input suppliers and farmers' organizations to supply fertilizer on time; black market for poor-quality fertilizer	Cooperation barrier	Providing access to specific fertilizers. Reorganizing input supply system. Contact with development partners such as the International Fertilizer Development Centre (IFDC) Africa for specific fertilizer and AfricaRice for improved seed. Testing specific inputs in the field.	District extension officer (RCPA, Togla I)	He acted as a technology and network champion. The extension service is involved in the testing of technologies introduced by IFDC. IFDC had provided equipment to process super-granular urea and NPK for inland valley rice production. The extension officer linked the rice growers' organization with AfricaRice and the Benin National Research Institutes (Institut National des Recherches Agricoles du Bénin – INRAB) to facilitate access to improved rice seed for rice growers.

of information or to make better connections to sources of information.

Concluding remarks

In this paper we have briefly reviewed agricultural innovation platforms through an 'innovation champions lens'. As the findings indicate, this perspective can be useful in obtaining a better understanding of the different roles on a platform for enabling transformative change. An important implication for the earlier work on agricultural innovation processes and innovation platforms (Ngwenya and Hagmann, 2011; Ayele *et al.*, 2012; Nederlof and Pyburn, 2012; Probst *et al.*, 2012) is that it is important to be more precise in the use of the term 'innovation champion' and to be aware of the existence of multiple and various innovation champions. Using a multiple

champion perspective can be helpful in identifying what types of actors should be present on the innovation platform once there is a clear view of the issues that need to be addressed. As our analysis has primarily presented a static picture of the champions in the three cases, there are some relevant questions that need to be further explored. How can a balance be best achieved between the informal emergence of champions and the appointment of champions? How can a genuine interest in championing be identified? How should the interaction between different champions on innovation platforms be coordinated? How can it be ensured that their active role is not to the detriment of input from other actors on the innovation platform who are less involved in championing? Further work is thus needed in the several ongoing agricultural innovation programmes that use the innovation platform approach.

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References

- Abate, T., Shiferaw, B., Gebeyehu, S., Amsalu, B., Negash, K., Assefa, K., Eshete, M., Aliye, S., and Hagmann, J. (2011), 'A systems and partnership approach to agricultural research for development: lessons from Ethiopia', *Outlook on Agriculture*, Vol 40, No 3, pp 213–220.
- Adekunle, A.A., and Fatunbi, A.O. (2012), 'Approaches for setting-up multi-stakeholder platforms for agricultural research and development', *World Applied Sciences Journal*, Vol 16, No 7, pp 981–988.
- Ayele, S., Duncan, A., Larbi, A., and Khanh, T.T. (2012), 'Enhancing innovation in livestock value chains through networks: lessons from fodder innovation case studies in developing countries', *Science and Public Policy*, Vol 39, No 3, pp 333–346.
- Chave, M., Ozier-Lafontaine, H., and Noël, Y. (2012), 'Towards agricultural innovation systems: designing an operational interface', *Outlook on Agriculture*, Vol 41, No 2, pp 81–86.
- Fichter, K. (2009), 'Innovation communities: the role of networks of promoters in Open Innovation', *R&D Management*, Vol 39, No 4, pp 357–371.
- Gupta, S., Cadeaux, J., and Dubelaar, C. (2006), 'Uncovering multiple champion roles in implementing new-technology ventures', *Journal of Business Research*, Vol 59, No 5, pp 549–563.
- Hauschildt, J., and Kirchmann, E. (2001), 'Teamwork for innovation – the "troika" of promoters', *RandD Management*, Vol 31, No 1, pp 41–49.
- Hermans, F., Stuiver, M., Beers, P.J., and Kok, K. (2013), 'The distribution of roles and functions for upscaling and outscaling innovations in agricultural innovation systems', *Agricultural Systems*, Vol 115, pp 117–128.
- Hoholm, T., and Araujo, L. (2011), 'Studying innovation processes in real-time: the promises and challenges of ethnography', *Industrial Marketing Management*, Vol 40, No 6, pp 933–939.
- Hounkonnou, D., Kossou, D., Kuyper, T.W., Leeuwis, C., Nederlof, E.S., Röling, N., Sakyi-Dawson, O., Traoré, M., and Van Huis, A. (2012), 'An innovation systems approach to institutional change: smallholder development in West Africa', *Agricultural Systems*, Vol 108, No 5, pp 74–83.
- Howell, J.M., Shea, C.M., and Higgins, C.A. (2005), 'Champions of product innovations: defining, developing, and validating a measure of champion behavior', *Journal of Business Venturing*, Vol 20, No 5, pp 641–661.
- Kilelu, C.W., Klerkx, L., and Leeuwis, C. (2013), 'Unravelling the role of innovation platforms in supporting co-evolution of innovation: contributions and tensions in a smallholder dairy development programme', *Agricultural Systems*, Vol 118, pp 65–77.
- Klerkx, L., and Aarts, N. (2013), 'The interaction between multiple champions in orchestrating innovation networks: conflicts and complementarities', *Technovation*, Vols 6–7, pp 193–210.
- Klerkx, L., Aarts, N., and Leeuwis, C. (2010), 'Adaptive management in agricultural innovation systems: the interactions between innovation networks and their environment', *Agricultural Systems*, Vol 103, No 6, pp 390–400.
- Lenné, J.M. (2008), 'Research into Use: managing achievements for impact', *Outlook on Agriculture*, Vol 37, No 1, pp 23–30.
- Ministry of Agriculture, Livestock and Fisheries (2011), *National Rice Development Strategy for Benin*, General Secretariat, Planning and Forecasting Office, Ministry of Agriculture, Livestock and Fisheries, Cotonou, Benin.
- Nederlof, E.S., and Pyburn, R., eds (2012), *One Finger Cannot Lift a Rock. Facilitating Innovation Platforms to Trigger Institutional Change in West-Africa*, KIT – Royal Tropical Institute, Amsterdam.
- Nederlof, E.S., Wongschowski, M., and Van Der Lee, F., eds (2011), *Putting Heads Together. Agricultural Innovation Platforms in Practice*, KIT – Royal Tropical Institute, Amsterdam.
- Ngwenya, H., and Hagmann, J. (2011), 'Making innovation systems work in practice: experiences in integrating innovation, social learning and knowledge in innovation platforms', *Knowledge Management for Development Journal*, Vol 7, No 1, pp 109–124.
- Osei-Amponsah, C., Visser, L., Adjei-Nsiah, S., Struik, P.C., Sakyi-Dawson, O., and Stomph, T.J. (2012), 'Processing practices of small-scale palm oil producers in the Kwaebibirem District, Ghana: a diagnostic study', *NJAS – Wageningen Journal of Life Sciences*, Vols 60–63, pp 49–56.
- Probst, L., Adoukonou, A., Amankwah, A., Diarra, A., Vogl, C.R., and Hauser, M. (2012), 'Understanding change at farm level to facilitate innovation towards sustainable plant protection: a case study at cabbage production sites in urban West Africa', *International Journal of Agricultural Sustainability*, Vol 10, No 1, pp 40–60.
- Quarmin, W., Haagsma, R., Sakyi-Dawson, O., Asante, F., van Huis, A., and Obeng-Ofori, D. (2012), 'Incentives for cocoa bean production in Ghana: does quality matter?' *NJAS – Wageningen Journal of Life Sciences*, Vols 60–63, pp 7–14.
- Röling, N., Hounkonnou, D., Kossou, D., Kuyper, T.W., Nederlof, S., Sakyi-Dawson, O., Traoré, M., and van Huis, A. (2012), 'Diagnosing the scope for innovation: linking smallholder practices and institutional context: Introduction to the special issue', *NJAS – Wageningen Journal of Life Sciences*, Vols 60–63, pp 1–6.
- Smith, D.J. (2007), 'The politics of innovation: why innovations need a godfather', *Technovation*, Vol 27, No 3, pp 95–104.
- Sulaiman, V.R., and Hall, A. (2002), 'Beyond technology dissemination: reinventing agricultural extension', *Outlook on Agriculture*, Vol 31, No 4, pp 225–233.
- Sumberg, J. (2005), 'Constraints to the adoption of agricultural innovations: is it time for a re-think?' *Outlook on Agriculture*, Vol 34, No 1, pp 7–10.
- Van de Ven, A.H., Polley, D.E., Garud, R., and Venkataraman, S. (1999), *The Innovation Journey*, Oxford University Press, New York.
- Yin, R.K. (2003), *Case Study Research: Design and Methods*, Sage, Thousand Oaks, CA.