Roles of Agroforestry in sustainable intensification of small farMs and food SEcurity for SocIetIes in West Africa (RAMSESII)

FULL PROPOSALS 215
APPLICATION FORM | SECTION IV

1. Background, Questions and Objectives

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The scientific question RAMSESII aims to answer is: "**How the intensification of agroforestry practices can contribute to sustainable agricultural production and food security in West Africa ?**". To sustainably increase food, income, and environmental security, RAMSESII will provide scenarios of intensification (focus 1 of the Leap-Agri call) of multifunctional agroforestry parklands, valuing both ecological processes and contextual adaptive practices along a diversity of ecological, technical and socio-economic conditions, knowledge and agricultural models (Hubert *et al.* 2013 https://www.cairn.info/revue-natures-sciences-societes-2013-1-page-71.htm). The parklands are located on a continuum of population density (Serpantié 1996) and the duration of fallows between successive cropping cycles. Fallows support biodiversity, tree regeneration, and soil fertility. However, with current population increase (about 3%/yr) yields are insufficient and impacts are variable on fallow dynamics and clearing (Pastur *et al.* 2012 http://hdl.handle.net/11336/5455). In the context of decreasing arable land, conventional agriculture intensification, is apparently a fast efficient solution, maximizing short-term yields, to meet food needs explosion. However, it presents a high risk of undermining the long-term factors of agricultural productivity stability (soil fertility, water cycles, seed diversity) and decreasing useful local knowledge needed to cope with harsh economic and/or environmental conditions. Additionally, conventional intensification is rarely affordable for small farmers, and has adverse effects on parklands since it conflicts with tree regeneration when animal traction is used (Brottem 2011 http://www.tandfonline.com/doi/abs/10.1080/08941920903377012). Alternative agricultural system serves multiple purposes, such as providing biomass energy, food and medicinal products, ensuring sustainable livelihoods, and maintaining a natural resource base for future generation. Agroforestry as a form of alternative agriculture provides multifunctional environmental, economic and social solutions to contribute to food and income security, and directly mitigating climate change by buffering micro-climate variations (FAO 2017 http://www.fao.org/forestry/agroforestry/en/). It also has potential to produce a greater amount and diversity of products for household consumption and sale on local and

international markets (provisioning services) contributing to income security, (Degrande *et al.* 2014) whilst providing supporting and regulating ecosystem services (TEEB 2010 http://www.teebweb.org/publication/mainstreaming-the-economics-of-nature-a-synthesis-of-the-approach-conclusions-and-recommendations-of-teeb/), which are a starting point to design more resilient and climate-smart farming systems (Garrity *et al.* 2010 http://www.evergreenagriculture.net/sites/default/files/Evergreen%20Agriculture%20Garrity%20et%20al%20Food%20Security.pdf, Abbas et al. 2017 https://www.ncbi.nlm.nih.gov/pubmed/28281063, Sida *et al.* 2018 https://doi.org/10.1016/j.agrformet.2017.10.013).

Currently, in West African parklands, tree density depends on balancing crop yield decline due to competition for light, water and nutrients with the multipurpose products and other services provided by trees. Furthermore, this density varies according to the social, economic and environmental weights priorities that farmers and communities give to the products and other services provided by parklands (Kiptot *et al.* 2014 https://doi.org/10.1016/j.cosust.2013.10.019, Mbosso *et al.* 2015 doi: 10.1007/s10457-015-9813-y). Despite the multiple benefits trees provide, and even if the environmental carrying capacity supports more trees in crop fields, this knowledge alone does not convince small farmers to plant and protect trees if they face heavy constraints (such as insecure land tenure) and/or if they have other, often short-term food and income, priorities. Access to parkland tree resources depends on how parklands and trees are governed as part of political, cultural, economic and social systems.

Being aware of these two axes in agricultural agroforestry intensification, RAMSESII aims at providing **Innovative Scenarios for Managing Sustainable Intensification (ISMSI) of agroforestry parklands** co-built with stakeholders on two scales to maximize and sustain their adoption:

1) Farm scale, with farmers by participative bio-economic modelling based on an economic, environmental, agronomical, and social scientific diagnosis combined with contextual knowledge. The bio-economic model allows simulations of parkland intensification scenarios (densification, new tree management techniques, introduction of new species, etc.) **proposed by farmers**, and provides the impacts on farm incomes and environmental performances.

2) Territory scale, with relevant stakeholders (local and national government and customary authorities, harvesters and producer groups, value chain businesses, NGOs, etc.) in a participative approach to co-build governance and land tenure realistic arrangements supporting agroforestry intensification. Territory is the scale at which state and customary

rights of access to- and use of- renewable land and resources (agricultural, tree, etc.) are negotiated and controlled (Le Bris et al. 1991 http://www.karthala.com/93-lappropriation-de-la-terre-en-afrique-noire-manuel-danalyse-de-decision-et-de-gestion-foncieres.html).

The model takes into account drivers of parklands dynamics and process-driven knowledge that determines the balance borderline between synergy and competition for resources between food crops and trees. Land use dynamics at landscape scale reveals the local contexts differentiated and decisive of socio-environmental drivers. Participative approach fosters stakeholders to identify realistic local governance scenarios taking into account the socio-economic and political context providing an enabling environment to support farmer's parkland intensification. Providing **ISMSI** from farm and territory participative approaches, RAMSESII expects to promote successful replicable innovative agroforestry intensification practices (Fig.1).

Based on existing research sites, participatory approach, process-driven research partnership, and multi-stakeholder platforms, RAMESII offers the opportunity to make significant progress i) in understanding and acting on trade-offs between ecosystem services provided by parklands, and ii) in trade-offs between these services and contextual priorities that farmers face.

In addition the focus 1 on "*Sustainable intensification of agriculture*" of the Leap-Agri call, RAMSESII outputs will impact (but not address) focus 2 on "*food systems for nutrition*" by contributing at increasing the availability of healthy and diversified traditional foods, and focus 3 on "*Expansion and improvement of agricultural markets and trade*" by allowing local actors to address economic potential to diversify and increase the supply of traditional tree products into multiple level tree product value chains.

The added value of Africa-Europe collaboration is to gather a wide and complementary expertise that creates synergy. The European partners have experience in numerous developing countries giving them a broad comparative view point. They also supply human, financial and technical means (platforms, expensive equipment), which is rare in Africa. Scientists from the African institutions bring an extensive depth of expertise on their country-specific context, constraints and needs, many of them having well established rural network. They also are the permanent link with national stakeholders able to maintain contact and monitor long term impacts of the project. Europe is currently recovering from historic extensive forest and agroforestry loss and degradation (Dubois 2016 http://lodel.irevues.inist.fr/pollution-atmospherique/docannexe/file/5700/dubois.pdf), while African farmers having been practicing agroforestry for millennia, but face economic, environmental and climatic crises. RAMSESII promotes sharing experiences on resilient

agroforestry, contributing to avoid the European tragedy.

2. Project Description

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2.1. The project approach

Capitalizing on decades of data and ongoing research partnerships in four parklands representative of their diversity in West Africa to facilitate extrapolation and replication of findings. RAMSESII adopts a holistic, transdisciplinary and multi-scale approach to assess and take into account the parklands management drivers translated into action research by:

1. Collaboration within an "*extended peer community*" of scientists: social, political and economic scientists, foresters, agronomists, soil scientists, geographers, biophysics, ecologists, remote-sensing experts, modellers, with farmers and other agroforestry stakeholders to **share scientific and endogenous knowledge** on most of West-African agroforestry issues;
2. Analysis of **farmer's priorities**, attitudes, skills and assets (Bandura 1977 https://www.uky.edu/~eushe2/Bandura/Bandura1977PR.pdf, Faye et al. 2012 https://doi.org/10.1080/14728028.2011.9756702, Sanogo 2014 http://docplayer.fr/61948517-Lettres-sciences-sociales-et-humaines.html, p.21) to adopt scientific and local evidence-based **ISMSI** developed with- and selected by-stakeholders;
3. Evaluation of **ISMSI impacts** on farm income and ecosystem services, mainly provisioning as a prioritiy for food security;
4. Characterisation of the **stakeholders**, **governance** frameworks, and **institutional** arrangements, and **policies** impacting parkland management,
5. Co-building with stakeholders realistic **scenarios** of **land tenure** and **governance** that enable farmers to sustainably intensify parklands;
6. Development of a monitoring & evaluation framework of the **project impacts**.

2.2. The four agroforestry systems building on existing research

RAMSESII capitalizes on existing equipments and results in four parkland types. Issues 2 to 5 (part 2.1), investigations on parklands drivers at landscape, territory, and farm scales, socio-ecosystem services provided by the trees, and modelling using variables not yet addressed such as management (e.g. tree density, rotation, pruning…), expected changes in climate, land use, demography and market prices will be innovative on the four parklands. The following researches have been conducted on each parkland:

1. **Millet-*Faidherbia albida*** (nitrogen-fixing tree) at Niakhar, **Senegal**, benefiting from the Health Demographic Surveillance System observatory since 1963 which tracks on social

and demographic changes and relations between people and their environment.

2. **Millet-*Guiera senegalensis*** in Thiès-Keur Matar, **Senegal**. Interactions between millet and this dominant shrub in the Sahel region have been studied since 2011.

3. **Shea (*Vitellaria paradoxa*)** near Koumbia, **Burkina Faso**, is an income provider with strong gender and international trade issues. "Cluster" dissemination tree regeneration techniques have been conducted since 2012 by INERA. Diagnosis and modelling of agronomic and environmental performances of crops were conducted in 2010, 2014 and 2016, but have not included shea trees.

4. **Sorghum-Piliostigma** spp. (nitrogen-fixing shrub) in Kamboinsé-Yilou, **Burkina Faso**. Sorghum-shrub interactions and improved existing management practices (forest zaï, Assisted Natural Regeneration, etc.) have been studied and monitored since 2013.

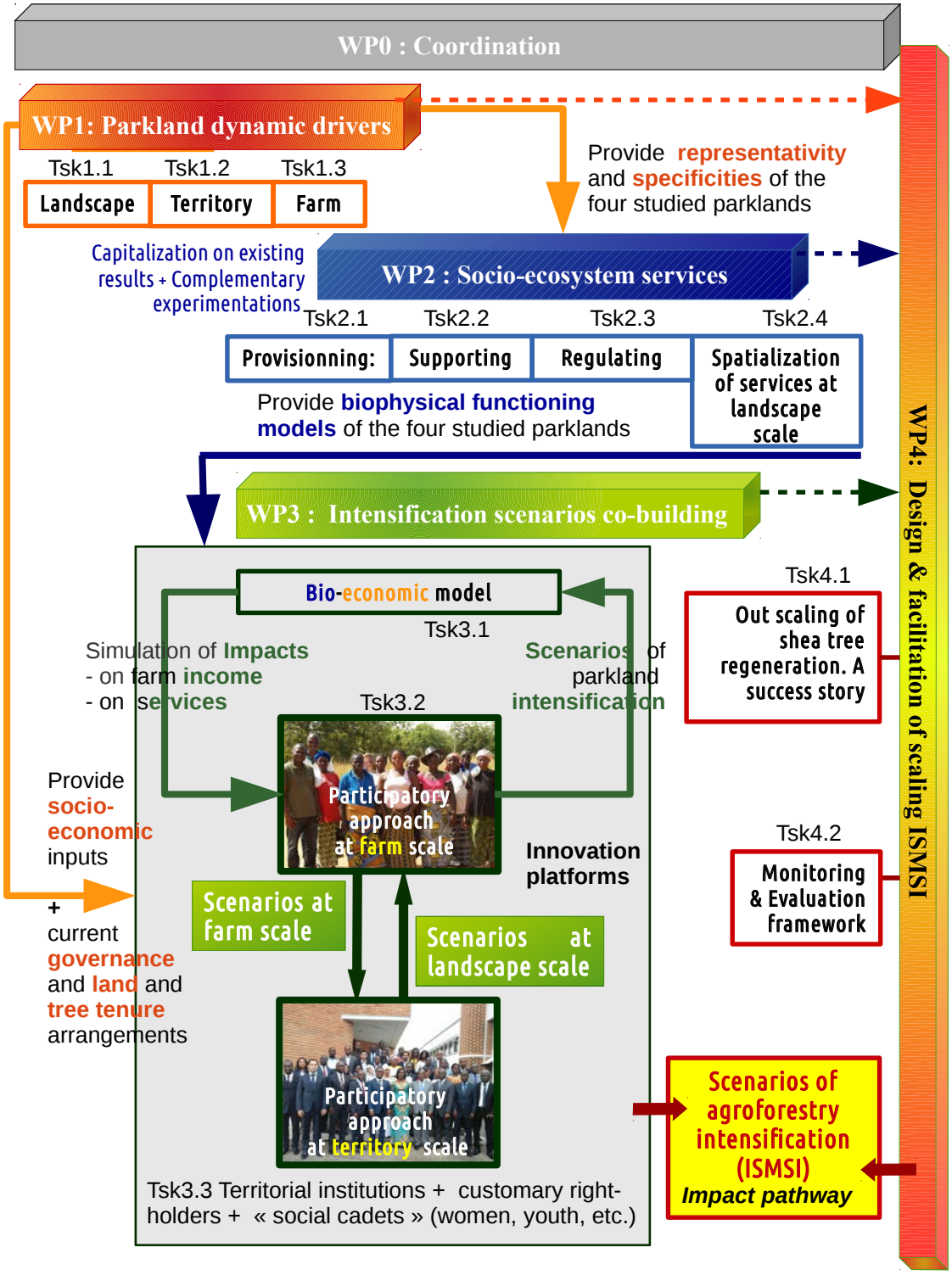
2.3. Project organisation

The project comprises five work-packages (Fig 1.):

• **WP0-Coordination** (co-leaders Seghieri J.-IRD **North** & Sanogo D.-ISRA **South**) will be ensured by a **Executive Committee** (EC). The EC ensures coordination, management and monitoring, organizing project meetings, making connections between scientists and stakeholders, ensuring respect of milestones and deliverables, stimulating publications and defining co-authorship policy, managing overall project data and the web portal, on-the-job training of early-career scientists and mentoring students. The EC is composed of the WP co-leaders and the Project Partners (PP). J. Brouwers (WUR) facilitates the *Theory of Change* and impact monitoring and evaluation for the project duration. Project management is outlined in part 5.

• **WP1- Parkland dynamics drivers** (co-leaders Droy I. & Dieng M.) will provide a diagnosis. Three tasks will analyse: Task 1.1 at *landscape scale* the population growth, migration, urbanization, climate variation, policies, market volatility, using remote sensing (multi-dates), parkland tree inventories and biometric measurements, surveys, analysis of population census, to assess the main biophysical, technical, and socio-economic management drivers of the studied parklands. Task 1.2 at *territory scale* the current sectorial and land regulation, structures of parkland governance and access, focusing on competition and conflicts around land and tree tenure that constrain resource and market access and sustainable parkland management, distance from villages, soils, agricultural, pastoral/transhumance, forestry practices, collective initiatives, group behaviour, i.e., gender, cultures, etc.. Task 1.3 at *farm scales*, the cropping/home garden system, technical means, inputs and outputs, tree product uses, leasehold contracts and access rights.

Fig. 1 – Chart of the project organisation



At *territory and farm scales*, participatory analysis and focus groups, will help to identify stakeholders who are motivated by innovative management and arrangements promoting sustainable intensification of parklands. WP1 outputs will provide (i) Representativity and

specificities of the studied parklands and impacts of climate, demographics, policies, agricultural practices, socio-cultural organization, and markets as input into WP2, (ii) Socio-economic issues as inputs into the innovation platforms and "economic" part of the bio-economic model (WP3), (iii) Current governance and land and tree product tenure arrangements as input into the innovation platforms, especially at territorial scale (WP3).

• **WP2- Socio-ecosystem services** (co-leaders Clermont-Dauphin C. & Coulibaly-Lingani P.) will quantify and characterize the processes underlying the ecosystem services provided by agroforestry parklands through four tasks: Task 2.1 Multipurpose *provisioning services* (food, energy, softwood lumber & timber pharmacopoeia, income) and their contribution to food security and farm income, energy and medicinal products; Task 2.2 Tree impacts on- and interactions with- crop production, plot-scale quantification and modelling of processes involved in *supporting* (biodiversity, biomass, water ressources, nutrients) Task 2.3 *regulating services* (bio-géochemical carbon, water and nutrient flows, micro-climate), and their dependence upon management practices. From previous tasks (2.1 to 2.3) results, Task 2.4 will assess at landscape scale the *impacts of land use patterns* on services (spatialization) from previous tasks and WP1. WP2 outputs will provide models simulating the biophysical functioning at *farm scale* of the four studied parklands as the "bio" part of the bio-economic model developed in WP3.

• **WP3- Intensification scenarios co-building** (co-leaders Sanfo S. & Ingram V.)

Bio-Economic modelling (Task 3.1) will assess the impacts on crop production, households income and environmental sustainability of parkland intensification management scenarios emerging from the participatory dialogue processes with farmers. Modelling will take into account current socio-economic situations from WP1, expected evolution in agroforestry drivers from WP1, and the short and long term trade-offs between provisioning and the other socio-ecosystem services from WP2. Modelling includes the growth models *CELSIUS* (crops), *MAESPA* (trees) (Charbonnier *et al.* 2017 https://doi.org/10.1111/pce.12964), and the economic model *ANDERS* (Affholder *et al.* 2013 https://ac.els-cdn.com/S0378429012003693/1-s2.0-S0378429012003693-main.pdf?_tid=52db97fe-e28d-11e7-ae06-00000aab0f27&acdnat=1513448407_be0d49b94f39191da32438d865260aa7). A participative *livelihood approach* at farm scale (Task 3.2) will investigate scenario feasibility (Turner *et al.* 2003 http://www.pnas.org/content/100/14/8074.full; Adger 2006 https://doi.org/10.1016/j.gloenvcha.2006.02.006), assessing the impacts of shocks, such as climatic, volatility of commodities prices, population growth, soil degradation, on livelihoods, and farmer's capacity to change their current practices. A participatory approach at *territory scale* (Task 3.3) targeting administrators, policymakers, decision makers, customary right-

holders, and « social cadets » (women, youths, migrant, breeders, farm labourers/harvesters, etc.), will assess realistic governance arrangements to support farmers who adopt scenarios with a focus on resolution of land and resource tenure conflicts (Ostrom 2003 https://doi.org/10.1177/0956928030150030002). To generate **ISMIS** with potential to upscale to regional and national level, innovation platforms based on models Convergence of Sciences, Strengthening of Innovation Systems (http://www.wageningenportals.nl/cossis) and Participatory Action Research (Sanogo et al. 2017 https://doi.org/10.1186/s40066-017-0091-y) will be set up in each country. They will bring together farmers (Task 3.2), scientists (WP1, WP2, Task 3.1), state institutions, customary authorities, and "social cadets" (Task 3.3) from whom interactions are expected to remove constraints, create cohesion and consensus, and reveal stakeholders capable of generating and achieving major changes that create new conditions on both farm and landscape level.

• **WP4- Design and facilitation of scaling ISMSI** (co-leaders Bastide B. & Brouwers J.)

In WP 4 the ToC is consolidated in a *Theory of Scaling*, allowing to design, during the course of the project, systemic changes for achieving design of sustainable **ISMSI** up-scaling and out-scaling for the project outreach. Task 4.1 will evaluate (PhD) a "cluster" diffusion method of shea tree regeneration techniques conducted by INERA since 2012, and the relevance of its use for increasing long-term RAMSESII impacts. The pyramid-style "cluster training" has been organised per village with 5 to 10 women chosen by the representatives of the unions according to their skills and their dynamism. They were trained (theory, implementation and follow-up) in all the tree regeneration techniques. Every year new "contact women" were included and another training takes place under the supervision of INERA. As trainers, the "contact women" receive technical and logistical support to be able to continue to hire their services. Task 4.2 will develop a monitoring & evaluation framework including the indicators and data use of the project, and selected from the result pathways: outputs-outcomes-impact as identified in the ToC and Annex 3. A set of quantitative and qualitative indicators will be identified at start-up of the project in a baseline provided by the results from existing researches and updated/completed during the project. These will be monitored and where necessary changes made and facilitated to achieve sustainable **ISMSI** up-scaling and out-scaling.

3. Impact of Project Results

(max. 1000 words) Word count: 948

3.1. Theory of Change

The ToC is the consortium "best thinking" at this stage on:

- WHAT the project wants to achieve (right column: outputs-outcomes-impact),
- WHY we think this makes sense (left column on problem analysis resulting in context and research questions),
- HOW we think that results will be achieved over time (the flow of the arrows over time).

At the beginning of the project, the ToC will be reviewed, changed, and validated with all the consortium partners (stakeholder engagement mapping).

Fig. 2 – Theory of Change of the project

Problem analysis	Impact pathway
Problem area to be addressed • Need to concurrently sustainably increase income, food and environmental security in West Africa • Fallow periods under pressure but needed to maintain biodiversity, tree generation and soil fertility • Conventional agriculture intensification has negative environmental impacts, is not sustainable for small farmers, and has adverse effects on parklands	**Impact** • Improved food security • Agroforestry landscapes prosper and regenerate ecologically • Poverty is significantly reduced amongst farmers in the selected project areas • Migration trends are slowed down (rural – urban and regional) • Rural to urban migration trends are slowed
Causes • With current population growth, food needs have increased rapidly • Yields are insufficient • Fallow periods decline resulting in soil fertility and arable land declining • Tree regeneration suffers from conversion to conventional agriculture intensification (animal traction), drought and diseases, excessive harvest for forage and fuelwood	**Outcome** • Sustainable intensification of agroforestry products that are part of the resilient farm, territory and landscape systems • More resilient agroforestry landscapes • Collaborative parklands intensification management involving key stakeholders and new institutional governance arrangements • Increased contribution of parklands to food and income security

Underlying knowledge and related causes

- Short term yields undermine long-term agricultural productivity factors
- Other ecosystem services under pressure (health, food, incomes) and maintaining natural resource base
- Climate change exacerbates causes
- Insufficient knowledge of what works in sustainably intensifying parklands on farm and landscape level
- Disenabling environment to support change towards sustainable intensified agroforest parklands
- Specific stakeholder groups often excluded from decision-making in agroforestry/agricultural innovations (e.g. women and youths) and traditional knowledge from elders often not incorporated

Output

- Establish alternative scenarios for agroforestry based on multifunctional management with environmental, economic and social benefits
- More resilient and climate smart farming systems identified, for four representative West African agroforestry systems
- Stronger parkland dynamics ecosystem services articulated
- Innovative scenarios tested, validated and agreed upon by key territory actors
- Inclusive participatory approach with specific attention to engage and address vulnerable, marginalized or voiceless societal groups in Parklands management and governance

Context analysis, research focus and design of project activities

Context

- The relevant mix of stakeholders is interested to be more engaged in finding sustainable landscape multi-level agroforestry intensification scenarios: farmer households at project sites; value chains operators in food, timber and non-timber forest products; extension agents, development NGOs (APAF and Birdlife International); extension agents; policymakers; and the scientific community including students.
- Need to provide more perspectives for vulnerable and under-represented groups women and youths
- Climate change process

Research Questions

- Identify and quantify social, economic and environmental factors that drive priorities of farmers and communities
- Identify and quantify trade-offs between ecosystem services provided by trees/shrubs
- Identify innovative scenarios for managing sustainable intensification of agroforestry parklands that sustain food and income security
- Identify with farmers modalities for out-scaling and upscaling successful innovative practices.

Relevant stakeholders: The different types of stakeholders (farmers, business representatives, researchers, local and regional government, NGOs, ..) are already mentioned in the WPs. The innovation platforms allow stakeholders to together analyse roles and perspectives, rely on bringing together different actors who can achieve major change in an agricultural common landscape and create new conditions at system levels higher than those of the field and the farm and community.

Capacity will be developed at three levels whose activities are described in part 2.3 (WP):

Activities described in part 2.3 (WP) will develop capacities at three levels:

1) *Individual*: farmers and other stakeholders - small and medium business men/women, local and regional policy makers, civil society representatives and national researchers - will have their contributions and roles strengthened with socio-technical and economic skills related to sustainable agroforestry management;

2) *Organisational*: producer groups, NGO's, research institutes, businesses and ministries will organise themselves to perform together analysis, revision, updating, implementation and monitoring a sustainable agroforestry and its governance.

3) *Network*: stakeholders will be able to perform as a network for the agroforestry intensification management and governance.

Communication strategy: The innovation platforms constitute a communication strategy, a participatory stakeholder analysis tools, to create common analysis, visioning, planning and sharing resources, and coordinated implementation and monitoring, allowing stakeholders to analyse roles and perspectives together.

3.2. Research Impact Pathway

Figure 2 ToC visualises the research results pathway while Annex 3 adds the indicators at output and outcome level. The four main research questions presented in Figure 2 build on the problem and cause analysis, contextualised in the West African regional context.

Current assumptions of the consortium are:

• All main actors in the selected parklands agree about the need to review and update current practices as they face low yielding and are not sustainable in the context of population increase, degrading ecosystems, climate change and food insecurity.

• All main actors agree that agroforestry parklands are a key intervention area where they can sustainably increase food and income security while reducing the contribution of agriculture and their vulnerability to climate change at multiscale levels.

• Local and regional policy makers agree to support the project, when associated at the start in an engaged and participative way.

4. Consortium information

(300 general description, and max. 250 words per partner) Word count: 1871

The project involves the following partners covering multiple disciplines who are distributed over the five WPs to ensure the expected objectives of the project are reached. Particular attention has been paid to gender and disciplinary balance as far as possible, and a fair gender balance in the WP leadership aiming to provide an example for project activities.

IRD and **CIRAD** (France) are multidisciplinary internationally recognized organizations working on agroforestry systems among other subjects of study related to sustainable development, largely in partnership with African institutions of higher education and research. They have been working together for a number of years, and in collaboration with ISRA, INERA, and **WASCAL** on one or several studied sites of the RAMSESII project. **WUR** (The Netherlands) has collaborated with CIRAD, IRD and ICRAF on numerous agroforestry and tree value chain projects in Central Africa in the last decade, and with **Birdlife** (NGOs, AP) on farming systems projects which impact ecosystems high biodiversity and avian fauna importance. **ISRA** and **INERA** have worked with CIRAD and IRD for a number of years on numerous projects in ecology, forestry and agriculture. Among women producers groups currently trained by **INERA** (B. Bastide) near Koumbia in Burkina Faso, most are **Global Shea Alliance (GSA)** people. Only the **Association pour la Promotion des Arbres Fertilitaires, de l'Agroforesterie et la Foresterie (APAF)** is a new partner to RAMSES.

IRD (France) is a public scientific institution whose multidisciplinary researches are based on a fair scientific partnership with developing countries that make science and innovation one of the main drivers of their development. 9 people (5 women) are involved, providing the project with the following skills, responsibilities and time, and a part of the equipment required for agronomic and biophysical measurements.

Name (gender F/M)	Position	Department	Status	WP &Tsk	Function/skill	Person-months /36
Seghieri J. (F)	Research Director	Internal and Continental Surface Dynamics (DISCO)	CPC	WP0-2 Tsk 2.3	**RAMSESII leader, IRD coordination, WP0 co-leader,** tree water functional traits and impacts	20
Clermont-Dauphin C. (F)	Research Fellow	Ecology, Biodiversity and Functioning of Continental Ecosystems (ECOBIO)	PM	WP2 Tsk 2.2	**WP2 co-leader,** Crop performances and yield diagnosis	10
Do F. (M)	Research Fellow		PM	WP2 Tsk 2.3	Tree water functional traits and impacts	6
Manlay R. (M)	Senior lecturer		PM	WP2 Tsk 2.2-2.4	Tree impacts on carbon balance and biomass	4
Serpantié G. (M)	Research fellow		PM	WP1-2 Tsk 1.2-1.3-2.1	Local farmers knowledge, perceptions, and practices, effect of	9

Name (gender F/M)	Position	Department	Status	WP &Tsk	Function/skill	Person-months /36
					mechanization and fallow reduction	
Lavigne Delville P. (M)	Research Director		PM	WP1-3 Tsk 1.2-3.3	Land tenure and park governance	6
Droy I. (F)	Research fellow	Societies and Globalization (SOC)	PM	WP1-2 Tsk 1.3-2.1	**WP1 co-leader**, gender roles in rural economy and agroforestry at farm and villages scales, demography	12
Loireau M. (F)	Research fellow		PM	WP1 Tsk 1.1-1.3	Landscape drivers, farmers attachment to parklands	10
Fargette M. (F)	Research fellow		PM	WP2 Tsk 2.4	Spatialization of ecosystem services	8

CIRAD (France) is a French research center which, together with the South countries, responds to the international challenges of agriculture and development, and included life sciences, social sciences and engineering sciences applied to agriculture, food and rural areas. It supplies the project with a tower and continuously measuring sensors measuring energy, water and carbon flows at plot scale at Niakhar (*F. albida*). 7 people (3 women) are involved, providing the project with the following skills, responsibilities, and time, and a part of the equipment required for agronomic and biophysical measurements.

Name (gender F/M)	Position	Department	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Jourdan C. (M)	Research fellow	Performance of tropical production and processing systems (PERSYST)	**PP**	WP0-2 Tsk 2.2, 2.3	**CIRAD coordination,** root architecture, physiology and dynamics	8
Roupsard O. (M)	Research fellow		PM	WP2-3 Tsk 2.2, 2.3-3.1	Carbon, water and radiation flux and balance at plot scale,modelling of tree functioning and productions	6
Affholder F. (M)	Research fellow		PM	WP3 Tsk 3.1	Bio-economic modelling, crop modelling	2.5
Leroux L. (F)	Research fellow		PM	WP2 Tsk 2.4	Remote sensing, modelling at lanscape scale	8
Soti V. (F)	Research fellow		PM	WP1Tsk 1.1	Remote sensing, parkland drivers	8
Douzet J-M. (M)	Research fellow		PM	WP2 Tsk 2.2-2.3	Tree impacts on crop production, yield diagnosis	6
Gerard F. (F)	Research fellow	Environments and Societies (ES)	PM	WP3 Tsk 3.2	Bio-economic modelling, farm modelling	2.5

WUR (The Netherlands) is a collaboration between Wageningen University and Wageningen Research Foundation working on food and food production, living environment, health, lifestyle and livelihood. WUR has been working with partners in Benin, Ghana and Mali on CoS SIS over the past decade to enabling smallholders to better capture opportunities. 5 people (2 women) are involved, providing the project with the following skills and responsibilities, mainly on (agro)forestry governance, landscape economics, gender participative approaches and ToC:

Name (gender F/M)	Position	Department/organization	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Ingram V. (F) (Group Wageningen Economic Research)	Assistant professor & Senior researcher	Environmental Sciences Group	**PP**	WP0-1-3 Tsk 1.1-1.2-3.2-3.3	**WUR coordination, WP3 co-leader** agroforestry economics, products and commodities, value chains and governance, participative approaches	**2.9**
Bongers F. (M) (Environmental Sciences Group)	Professor		PM	WP1-2 Tsk 1.1-1.3-2.1-2.3-2.4	Forest ecology, tree functional traits and tree performance, non-timber forest products	1.7
Arts B. (M) (Environmental Sciences Group)	Professor		PM	WP1-3 Tsk 1.2-3.3	Forest, biodiversity and climate change governance, local natural resource management, interconnections (multi-level governance)	0.7
Brouwers J. (M)	Research fellow	Centre for Development Innovation (CDI)	PM	WP0-1-2-3-4 as ToC facilitator process WP4 Tsk 4.2	**WP4 co-leader**, Innovation platforms, environment, gender, capacity development, institutional change and education.	1.3
van den Berg J. (F)	Research fellow	Wageningen Economic Research	PM	WP1-2 Tsk1.2-1.3-2.1	Agroforestry economics, incomes and its distribution within chains, participative approach	0.9

ISRA (Senegal) It is a public research and training institution. It has multidisciplinary research teams that tackle several themes of participatory action research (PAR) in a peasant environment and contribute to improve scientific knowledge, and technological innovations on the agroforestry systems, and develop decision-making tools for the agricultural sector improvement. 8 people (4 women) are involve on the project, providing the project with the following skills and responsibilities.

Name (gender F/M)	Position	Centre	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Sanogo D. (F)	Director of the National Centre of Forest. Research (CNRF) Senior Researcher (CAMES)	National Center for Forestry Research (CNRF)	**PP**	WP0-1-2-3 Tsk 1.1-1.2-2.2-3.2-3.3	**ISRA coordination**, WP0 co-leader, Ecology, vegetation dynamics, typology of agroforestry parklands, Innovation platforms	**20**
Ba H. S. (F)	Research assistant		PM	WP2 Tsk 2.2	Microbiology, tree impacts on soil fertility	7
Sarr M. S. (F)	Research fellow		PM	WP2 Tsk 2.3	Tree water functional traits and impacts	7
Dieng M. (M)	Research fellow		PM	WP1-2 Tsk 1.1-1.2-2.4	**WP1 co-leader**, Remote sensing, GIS, tree cover impact on carbon	11
Sall M. (M)	Research fellow	Office of Macro-Economic Analysis (BAME)	PM	WP1-3 Tsk 1.2-1.3-3.1	Agro-economy, typology of agroforestry parklands, income modelling	7
Tall L. (F)	Research fellow	National Laboratory for Research on Plant Productions (LNRPV)	PM	WP2 Tsk 2.2	Agroecology, tree impacts on soil nutrient flows	7
Baldé A. B. (M)	Research	National Center for Agronomic	PM	WP2-3	Crop modelling	5

Name (gender F/M)	Position	Centre	Status	WP &Tsk	Function in RAMSESII	Person-month/36
	fellow	Research (CNRA)		Tsk 2.1-2.2-3.1		

INERA (Burkina Faso) is one of the four public research institutes of the National Center for Scientific and Technological Research (CNRST), specialized in the formulation, execution and coordination of environmental and agricultural research. 10 people (3 females) are involved, providing the project with the following responsibilities and skills, mainly in parklands biodiversity and use of forest products:

Name (gender F/M)	Position	Department	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Bastide B. (F)	**Research fellow**		**PP**	WP0-1-2-4, Tsk 1.2-1.3-2.1-4.1	**INERA coordination, WP4 co-leader**, ecology, dynamics, typology and products of agroforestry parklands, cluster difusion of tree regeneration techniques	**20**
Coulibaly-Lingani P. (F)	Research fellow	Environment and Forests	PM	WP1-2-3 Tsk 1.2-1.3-2.1-3.2-3.3	**WP2 co-leader,** environmental sociology and economy, participative approach, governance	12
Some-Dao M. (F)	Research fellow		PM	WP2 Tsk 2.1	Drivers of fruits production of trees/shrubs	4
Dibloni O.T. (M)	Director of the Dpt Envir. Forest		PM	WP2 Tsk 2.2	Parkland animal biodiversity	4
Sanou J. (M)	Research fellow		PM	WP2 Tsk 2.3	Tree water functional traits and impacts	8
Zida I. (M)	Research engineer		PM	WP2 Tsk 2.1	Forest Entomology, edible and pollinating insects, pest control	5
Koura P. (M)	Research engineer		PM	WP2 Tsk 2.1-2.2	Parkland biodiversity and ethnobotany, use of forest products	6
Koala J. (M)	Research fellow		PM	WP2 Tsk2.1	Root architecture, physiology and dynamics	8
Ouedraogo L. (M)	Research fellow	Center of Remote Sensing and Geographical Information (CTIG)	PM	WP1 Tsk1.1-1.2	Geography, remote sensing, mapping, GIS	8
Sanon M. (M)	Research fellow	Management of Natural Resources-Production Systems (GRN-SP)	PM	WP2-3 Tsk2.2-3.1	Crop modelling	8

WASCAL (Burkina Faso) is a large-scale research-focused Climate Service Centre designed to help tackle this challenge and thereby enhance the resilience of human and environmental systems to climate change and increased variability. It does so by strengthening the research infrastructure and capacity in West Africa related to climate change and by pooling the expertise of ten West African countries and Germany. The Competence Centre, newly established, carries out research and provides science-based advice to policymakers and stakeholders on climate change impacts, mitigation, and

adaptation measures. 2 people (2 females) are involved, providing the project with the following skills around the bio-economic modelling:

Name (gender F/M)	Position	Centre	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Sanfo S. (F)	Research fellow	Competence Centre	PP	WP 2-3 Tsk 2.1-3.1	**WP3 co-leader**, Socio-economic modelling, farm modelling	9
Worou N. (F)	Research fellow		PM	WP 2-3 Tsk 2.2-3.1	Crop modelling	4

Three NGOs (AP) described below are associated to the project in order to ensure the diffusion of the project outputs to different groups of stakeholders, at various geographic scales (national, regional, international), and on the long terms after the end of the project, in collaboration with African scientific partners. To do so, they attend to the three project meetings and participative workshops planned in the project. They also contribute to the WP5, tsk5.3 working on definition of impact indicators. Also, they are in charge of the widespread upscaling dissemination of the project outputs (part 2.7 of the LeapAgri call) following the best diffusion technics evaluated by the RAMSESII.

Birdlife International is a science based conservation organisation that has developed a "Trees, bees and birds" (TBB) management strategy for shea parklands, and aims to contribute to the conservation and sustainable use of natural resources in Burkina Faso in order to help improve the living conditions of the population. They have significant experience in promoting Farmer Managed Natural Regeneration, sustainable farming practices and decreasing pressure on the trees. The **GSA**, a non-profit industry association including women producers and private companies, promotes industry sustainability, quality practices, and demand for shea through public-private partnerships. **APAF** promotes agroforestry based on fertilizer trees in Africa using "peasant-to-peasant" dissemination methods.

Name (gender F/M)	Position	Institution	Division	Country	Status	WP &Tsk	Function in RAMSESII	Person-month/36
Moreno J.G. (M)	International Programme Coordinator	Birdlife	Burkina Faso	Burkina Faso		WP 3-4 Tsk 3.3-4.2	Output dissemintation impact indicators	2
Devresse B. (M)	Executive director	APAF	France	Burkina/Senegal/France	AP	WP 3-4 Tsk 3.3-4.2	Output dissemintation impact indicators	2
Veyrier M. (F)	Development Director	GSA	Ghana	International		WP 3-4 Tsk 3.3-4.2	Output dissemintation impact indicators?	2

5. Project management

(max. 500 words) Word count: 483

The project decision-making body is the **Executive Committee** (EC) described in WP0 (part

2.2) and composed of the Consortium Project Coordinator (CPC), the Project Partners (PP), and the WPs co-leaders, J. Brouwers (WUR) facilitating the Theory of Change formulation. The EC ensures overall coordination, management and monitoring, centralises requests and disseminates information between Partner Members (PM) inside WPs, between WPs, among stakeholders, organizes project meetings, facilitates and encourages result valorisation and dissemination. Especially, the EC organizes, supports and facilitates the following activities (M=milestones; D=deliverables):

5.1. Executive Committee (EC) meetings organization

The EC convenes before each project meeting (M 0.2, M 0.3, M 0.4) to set milestones, and after for reporting on conclusions (D 0.1, D 0.2, D 0.3). The EC will ensure the updating information on the web site that will be set up for the diffusion of the project progression and results (internet), and facilitation exchanges of information and working documents (intranet) between PM, PP, and AP. The web site will be set up as it was done for the SAFSE project (https://safse.cirad.fr).

5.2. Organization of the project meetings:

The CPC, PP, all the Project Members (PM) and Associated Partners (AP) will attend to the three project meetings. The kick-off meeting, hold in Burkina Faso, (M 0.2), will allow to recap the project objectives and strategies; the mid-term (in Senegal, M 0.3) and final meetings (in Montpellier, M 0.4), will allow an adjustment of the proposed RAMSESII design to field reality taking account of and respond to stakeholders feedback (annual reporting D 0.1 to D 0.3), sharing results and preparing scientific multi-team publications, insuring the early setting up of the two innovation platforms.

5.3. Facilitating WPs forums

WP co-leaders create and update web forums (M 1.0.1, M 2.0.1, M 3.0.1, M 4.0.1), provide to the EC an updated list of relevant points to address per WP before each project meeting (M 0.2, M 0.3, M 0.4), and provide input to the annual reporting prepared by the EC after each project meeting. Web forums harmonize scientific and methodological communication between PM and WP leaders, ensuring that the specific objectives and deadlines are clear for all. Each forum elaborates and orientates its methodological choices, facilitates capacity building by harmonizing between the PM and different stakeholders and sites, and aids common and mutual investigations.

5.4. Gantt chart

See Fig 3 (following page)

5.5 Risks and solutions

Risks		Solutions
Too limited data for the modelling task	==>	Already existing results will limit the risk

Slippage on the planning linked to an initial bad estimate of the duration necessary to the task executions ==>	Gantt chart was built through a concertation between all the PM of each WP + Kick-off meeting will focus on the time table
Dispersed work teams due to dispersed funds between six institutions + numerous PM ==>	Project meetings will be carefully prepared + the ToC wil facilitate common objectives and synergy

Fig. 3 – The project provisional timetable

The Gantt can is plotted in more details in:
https://www.dropbox.com/s/zfpvbdilcl6zlhp/Gantt_RAMSES_final.xlsx?dl=0

N°	WPs & Tasks	Start	Duration (days)	End
1	**WP0 Project coordination**	15/08/2018	1095	14/08/2021
2	***M 0.1*** *Consortium Agreement*	15/08/2018	10	25/08/2018
3	kikoff meeting preparation in Burkina Faso	15/08/2018	21	05/09/2018
4	Executive Committee (EC) meeting preparing kikoff meeting	04/09/2018	2	06/09/2018
5	***M 0.2*** *Kikoff meeting holding in Burkina Faso*	05/09/2018	10	15/09/2018
6	Executive Committee (EC) meeting preparing the reporting	15/09/2018	2	17/09/2018
7	**D 0.1 First project reporting**	02/10/2018	3	05/10/2018
8	Mid-term meeting preparation in Senegal	25/01/2020	21	15/02/2020
9	Executive Committee (EC) meeting preparing the mid-term meeting	14/02/2020	2	16/02/2020
10	***M 0.3*** *Mid-term meeting holding in Senegal*	15/02/2020	3	18/02/2020
11	Executive Committee (EC) meeting preparing the reporting	18/02/2020	2	20/02/2020
12	**D 0.2 Mid-term project reporting**	04/03/2020	3	07/03/2020
13	Final meeting preparation in Montpellier, France	06/07/2021	21	27/07/2021
14	Executive Committee (EC) meeting preparing the final meeting	26/07/2021	2	28/07/2021
15	***M 0.4*** *Final meeting holding in Montpellier, France*	27/07/2021	3	30/07/2021
16	Executive Committee (EC) meeting preparing the reporting	30/07/2021	2	01/08/2021
17	**D 0.3 Final project reporting**	16/08/2021	3	19/08/2021

N°	WPs & Tasks	Start	Duration (days)	End
18	**WP1 Parkland dynamic drivers Coordination**	01/09/2018	436	11/11/2019
19	***M 1.0.1*** *Web forum set up*	22/08/2018	3	25/08/2018
20	***M 1.0.2*** *Reporting 2018 to the EC on relevant points to address in WP1*	01/09/2018	3	04/09/2018
21	***M 1.0.3*** *Annual reporting 2020 to the EC*	30/01/2020	3	02/02/2020
22	***M 1.0.4*** *Annual reporting 2021 to the EC*	11/07/2021	3	14/07/2021
23	**Task 1.1 Drivers at landscape scale**	01/09/2018	300	28/06/2019
24	State-of-the-Art on parklands dynamics and detection using remote sensing	01/09/2018	20	21/09/2018
25	Identification and acquisition of satellite imagery	01/10/2018	10	11/10/2018
26	Images processing and field survey for parklands mapping	01/11/2018	30	01/12/2018
27	Images processing for parklands mapping at different dates	01/01/2019	30	31/01/2019
28	***M 1.1.1*** *Report on the evolution of land cover during 50 years*	01/05/2019	3	04/05/2019
29	State-of-the-Art on climatic evolution	01/09/2018	30	01/10/2018
30	Acquisition of climatic data	01/11/2018	15	16/11/2018
31	Analysis of the climate evolution	01/11/2018	30	01/12/2018
32	State-of-the-Art on biodiversity and climate change	01/09/2018	30	01/10/2018
33	***M 1.1.2*** *Report on climate and biodiversity evolution during 50 years*	01/03/2019	3	04/03/2019
34	State-of-the-Art on population dynamics	01/10/2018	15	16/10/2018
35	Acquisition of demographic data (census and demographics and health surveys)	15/10/2018	15	30/10/2018
36	Analysis of population growth, migration, spatial distribution of population	30/11/2018	60	29/01/2019
37	***M 1.1.3*** *Report on demographic and vulnerability indicators*	01/02/2019	3	04/02/2019
38	Analysis of land cover and parkland dynamics in relation to demographic and climatic data	15/03/2019	40	24/04/2019
39	Mapping of land use change, typology of parklands	01/02/2019	40	13/03/2019
40	Landscapes typology and parklands position inside	15/09/2018	70	24/11/2018
41	Parklands Landscapes cartography	15/09/2018	40	25/10/2018
42	***M 1.1.4*** *Report on land cover and parkland dynamics in relation with demographic and climatic*	01/06/2019	3	04/06/2019
43	State-of-the-Art on value chains of non-timber forests products (NTFP)	01/09/2018	15	16/09/2018
44	Market regulation, income distribution in value chains for main NTFP	16/09/2018	20	06/10/2018
45	NTFP products, possibilities for sustainable harvesting and management	06/10/2018	30	05/11/2018
46	***M 1.1.5*** *Report on income distribution in value chains for non-timber forest products*	26/11/2018	3	29/11/2018
47	**D 1.1.1 Report on the typlogy and evolution of parklands at landscape level**	25/03/2019	3	28/03/2019
48	**D 1.1.2 Report on demographic evolution and parkland dynamics**	25/06/2019	3	28/06/2019
49	**D 1.1.3 Report on market, rules and value chains for non-timber forests products**	26/11/2018	3	29/11/2018
50	**Task 1.2 Drivers at territory scale**	01/09/2018	269	28/05/2019
51	Typology and dynamics of parks (species,diversity, sizes, pattern and density)	15/09/2018	40	25/10/2018
52	Agroforestry practices	15/03/2019	30	14/04/2019
53	Impacts of exogenous alternatives at a collective leval	15/03/2019	40	24/04/2019
54	Mapping of parkland trends and their dynamics	01/09/2018	30	01/10/2018
55	Characterization of the current state of the agroforestry parklands	01/11/2018	40	11/12/2018
56	Typology and spatial distribution and dynamic of the studied parklands	01/01/2019	40	10/02/2019
57	Georeferencing and spatial database of agroforestry parklands	01/02/2019	30	03/03/2019
58	***M 1.2.1*** *Characterization and mapping of agroforestry parklands*	01/05/2019	3	04/05/2019
59	Identification of strategic groups involved in land governance and tenure	01/09/2018	30	01/10/2018
60	Land regulation and changes in land use and diversity of farmer practices	15/10/2018	15	30/10/2018
61	Analysis of social and economic constraints: gender, culture, economic conditions	30/11/2018	30	30/12/2018
62	***M 1.2.2*** *Local land governance and management rules*	01/03/2019	3	04/03/2019
63	D 1.2.1 Report on typology and current state of agroforestry parklands at territory level	25/05/2019	3	28/05/2019
64	D 1.2.2 Report on social and economic constraints and drivers at territory level	20/01/2019	3	23/01/2019
65	D 1.2.3 Report on land tenure and ressource acces: the case of agroforestry parklands	25/03/2019	3	28/03/2019
66	**Task 1.3 Drivers at farm scale**	01/09/2018	436	11/11/2019
67	Co-construction of the methodology to study attachment to parkland	15/09/2018	30	15/10/2018
68	Collect and exploitation of data on attachment to parkland	15/02/2019	30	17/03/2019
69	***M 1.3.1*** *Report on attachment to parkland*	17/03/2019	3	20/03/2019
70	Co-construction of socio-economic survey at households/farm scales	01/09/2018	20	21/09/2018
71	Socio-economic surveys and their analyses	01/03/2019	60	30/04/2019
72	Farm and individual actors typology, vulnerability profiles	15/09/2019	30	15/10/2019
73	***M 1.3.2*** *Report on socio economics profiles of farmers on parklands*	15/10/2019	3	18/10/2019
74	Co-construction of the methodology of parkland vegetation survey at farm scale	01/09/2018	15	16/09/2018
75	Practices concerning diretly or inderectly trees at plot and farm level in dry season	15/03/2019	30	14/04/2019
76	Data collect and analysisn on parkland vegetation	15/09/2018	60	14/11/2018
77	Management practices at plot and farm scales during dry and humid season	15/04/2019	30	15/05/2019
78	**D 1.3.1 Report on typology of farmers livelihoods on parklands**	08/11/2019	3	11/11/2019
79	**D 1.3.2 Report on farmer attachment to parkland and practices**	10/04/2019	3	13/04/2019

N°	WPs & Tasks	Start	Duration (days)	End
80	**WP2 Socio-ecosystem services Coordination**	08/09/2018	831	17/12/2020
81	***M 2.0.1*** *Web forum set up*	22/08/2018	3	25/08/2018
82	***M 2.0.2*** *Reporting to EC on relevant points to address in WP2*	01/09/2018	3	04/09/2018
83	***M 2.0.3*** *Annual reporting 2020 to the EC*	30/01/2020	3	02/02/2020
84	***M 2.0.4*** *Annual reporting 2021 to the EC*	11/07/2021	3	14/07/2021
85	**Task 2.1 Provisioning services**	08/09/2018	564	25/03/2020
86	Literature review	08/09/2018	60	07/11/2018
87	Surveys & focus groups on farmer perceptions of parks services, links with social organization	08/09/2018	90	07/12/2018
88	Carbon balance in trees	01/03/2019	250	06/11/2019
89	Analysis of annual crop performances	01/07/2019	250	07/03/2020
90	Quantification of tree products (wood, edible leaf and forage, fruits)	01/04/2019	120	30/07/2019
91	Health and welfare	01/02/2019	60	02/04/2019
92	**D 2.1.1 Report on comparison of farm and scientist knowledges on provisioning servic**	22/03/2020	3	25/03/2020
93	**Task 2.2 supporting services**	01/03/2019	329	24/01/2020
94	Animal biodiversity assessment	01/03/2019	180	28/08/2019
95	Tree and annual crop or grass diversity assessment	15/09/2019	30	15/10/2019
96	Primary biomass assessment (aerial and underground)	01/03/2019	250	06/11/2019
97	Water ressources assessment	01/05/2019	250	06/01/2020
98	Diversity of tree pollinators	01/03/2019	250	06/11/2019
99	Tree and shrub sexual reproduction	01/03/2019	250	06/11/2019
100	Nutrient stocks in soil and plants	01/07/2019	120	29/10/2019
101	**D 2.2.1 Report on supporting services quantification in the four studied parkland**	21/01/2020	3	24/01/2020
102	**Task 2.3 Regulating services**	01/03/2019	469	12/06/2020
103	Water cycle	01/05/2019	360	25/04/2020
104	Nutrients cycling	01/07/2019	120	29/10/2019
105	Microclimat	01/07/2019	120	29/10/2019
106	Soil biological functionning	01/07/2019	120	29/10/2019
107	Carbon storage and balance	01/03/2019	120	29/06/2019
108	**D 2.3.1 Report on regulating services quantification in the four studied parkland**	16/05/2020	3	19/05/2020
109	**D 2.3.2 Report on modellling to simulate biophysical parkland functioning at farm scal**	09/06/2020	3	12/06/2020
110	**Task 2.4 Spatialization of services at landscape scale**	01/05/2019	596	17/12/2020
111	Downloaded satellite images	01/05/2019	120	29/08/2019
112	Preprocessing of satellite images	01/05/2019	240	27/12/2019
113	Extraction of landscape metrics from WP 1- Tsk1.1	01/06/2019	60	31/07/2019
114	Building a ground database from WP 2 - Tsk 2.2 and from WP 3 - Tsk 3.1	01/11/2020	30	01/12/2020
115	Simulation of impacts of lanscape structure on light and cover temperature	01/11/2019	60	31/12/2019
116	Calibration of cereal biomass and yield model at landscape scale	01/01/2020	60	01/03/2020
117	Spatialization of the model at the landscape scale	01/03/2020	30	31/03/2020
118	**D 2.4.1 Report on spatialization of services**	01/01/2021	3	17/12/2020

N°	WPs & Tasks	Start	Duration (days)	End
119	**WP3 Intensification scenarios co-building Coordination**	01/09/2018	842	21/12/2020
120	***M 3.0.1*** *Web forum set up*	22/08/2018	3	25/08/2018
121	***M 3.0.2*** *Reporting to EC on relevant points to address in WP2*	01/09/2018	3	04/09/2018
122	***M 3.0.3*** *Annual reporting 2020 to the EC*	30/01/2020	3	02/02/2020
123	***M 3.0.4*** *Annual reporting 2021 to the EC*	11/07/2021	3	14/07/2021
124	**Task 3.1 Bio-Economical modelling**	15/09/2018	825	18/12/2020
125	Sensitivity and uncertainty analyse of available crop models (project start)	15/09/2018	106	30/12/2018
126	Parametrization of farm simulation models ANDERS (crop) and MAEPA (trees & shrubs)	15/09/2018	180	14/03/2019
127	Identification of the main coefficients to be used for integrating tree management (MAEPA paran	01/02/2019	90	02/05/2019
128	***M 3.1.1*** *List of the main technical coefficients to be used for integrating tree management*	02/05/2019	3	05/05/2019
129	Workshop simulating crop performance under trees of varying densities	17/06/2019	5	22/06/2019
130	Quantification of the key parameters, their candidate values, and major gaps to be filled	20/06/2019	7	27/06/2019
131	***M 3.1.2*** *List of the key parameters*	27/06/2019	3	30/06/2019
132	Sensitivity and uncertainty analyse of crop models under trees available (project end)	01/07/2019	510	22/11/2020
133	D 3.1 Crop simulations under scenarios of tree/shrub densities	15/12/2020	3	18/12/2020
134	**Task 3.2 Participative approach at farm scale ("Livelihood Approach"):**	01/09/2018	790	30/10/2020
135	Participatory analysis and focus groups to identify stakeholders	15/09/2018	30	15/10/2018
136	Desktop review and validation of typology of farmers from WP1	01/09/2018	240	29/04/2019
137	***M 3.2.1*** *Report to farmer leaders of farmer typology*	15/05/2019	3	18/05/2019
138	Focus group discussion, Key Informant Interview and household surveys	22/05/2019	60	21/07/2019
139	***M 3.2.2*** *Dataset on main household copying strategies facing contraints*	31/10/2019	3	03/11/2019
140	Livelihood and income analysis of impacts of "trees" on household food and income	01/12/2019	210	28/06/2020
141	Household food consumption and income sensitivity to climatic and market risk	01/08/2020	90	30/10/2020
142	***M 3.2.3*** *Report on household food consumption and income sensitivity to climatic and market ris*	14/11/2020	3	17/11/2020
143	D 3.2.1 Scenarios of parkland management intensification	14/11/2020	3	17/11/2020
144	**Task 3.3 Participative approach at territory scale**	01/09/2018	665	27/06/2020
145	Participative diagnosis, and vulnerability analysis	01/09/2018	30	01/10/2018
146	Participatory workhsops to set up the innovation platforms	18/03/2020	30	17/04/2020
147	***M 3.3.1*** *Platforms setting up*	25/04/2020	3	28/04/2020
148	Organization of the platform meeting agenda	28/04/2020	15	13/05/2020
149	Participatory governance arrangements assessement	21/05/2020	15	05/06/2020
150	Capacity building	28/05/2020	30	27/06/2020
151	**D 3.3.1 Scenarios of agrogorestry parkland intensification (ISMSI)**	18/12/2020	3	21/12/2020

N°	WPs & Tasks	Start	Duration (days)	End
152	**WP4 Design & facilitation of scaling ISMSI Coordination**	01/09/2018	1043	10/07/2021
153	***M 4.0.1*** *Web forum set up*	22/08/2018	3	25/08/2018
154	***M 4.0.2*** *Reporting to EC on relevant points to address in WP2*	01/09/2018	3	04/09/2018
155	***M 4.0.3*** *Annual reporting 2019 to the EC*	30/01/2020	3	02/02/2020
156	***M 4.0.4*** *Annual reporting 2020 to the EC*	11/07/2021	3	14/07/2021
157	***M 4.0.5*** Request additional funds for clustering and up-scaling	10/08/2019	3	13/08/2019
158	**Task 4.1 Out scaling of shea tree regeneration. A success story**	15/09/2018	889	20/02/2021
159	PhD on cluster method assessment start	15/09/2018	889	20/02/2021
160	Review of existing diffusion methods	01/11/2018	90	30/01/2019
161	***M 4.1.1*** *Report on existing diffusion methods*	14/02/2019	3	17/02/2019
162	Assessment of population adherence to assisted regeneration techniques	15/02/2019	60	16/04/2019
163	Assessment of assisted regeneration impact on vegetation dynamics (from WP1 results)	16/04/2019	60	15/06/2019
164	Assessment of the impact of assisted regeneration on social aspects, especially gender	15/06/2019	60	14/08/2019
165	Assessment of the impacts of assisted regeneration on land tenure	14/08/2019	60	13/10/2019
166	PhD writting	14/10/2019	490	15/02/2021
167	**D 4.1.1 PHD report (draft) on relevance of the "cluster" diffusion technique for upsca**	15/02/2021	3	18/02/2021
168	***Task 4.2 Monitoring & Evaluation framework***	01/09/2018	1043	10/07/2021
169	ToC reviewed, changed, and validated with Theory of Scaling with all consortium partners	01/09/2018	5	06/09/2018
170	***M 4.2.1*** *Stakeholder engagement mapping*	07/03/2020	3	10/03/2020
171	Review of existing indicators of impacts	01/09/2018	90	30/11/2018
172	Development of a diffusion strategy of **ISMSI** and impact indicators updating	17/09/2018	948	22/04/2021
173	Test of scaling indicator monitoring	04/09/2018	8	12/09/2018
174	Writting report on strategy of scaling ISMSI facilitation	16/06/2021	21	07/07/2021
175	**D4.2.1 Report on the strategy of scaling ISMSI facilitation and indicators to monitor**	07/07/2021	3	10/07/2021

6. Follow-up on project results

*(max. **500 words**)* Word count: 494

The project results will be highlighted, as usually in a research project, by scientists international high level publications, students MSc and PhD thesis reports, and scientific talks in national and international meetings and worshops. Technical datasheets will be co-built by all the stakeholders in order to promote the project and its outputs in all the national, regional and local institutions. Rural populations will be sensitized to the project outputs through radio and television programs in vernacular languages.

Baseline and monitoring mechanisms will be set up for assessing their impacts in the environment. Birdlife will thus promote knowledge exchanges and cross-learning with the local authorities and communities, and between communities. GSA is committed to working together with all stakeholders to promote growth of the shea industry in Africa and around the world. New knowledge generated by the project, especially the best practices, will be presented and discussed with potential adopters (e.g. women's cooperatives) and promoters (e.g. private sector, NGOs, donors, government, and research institutions) of the shea industry (at the 2020 Africa International Conference involving 500 stakeholders across the value chain, at 2 country-level workshops organized in other countries than Senegal and Burkina-Faso). GSA is deeply concerned by increasing the supply in shea products that is currently insufficient facing the booming international demand in cosmetic and chocolate confectionery industries.

In order to ensure the upscaling practical use of research results, from month 12-18 of the project period, the consortium will submit a proposal to apply for additional funds targeting NGOs (AP) involved in RAMSESII, for additional scaling-up activities that should lead to an enhanced level of sustainable outcomes and impacts.

The participatory approach, which is building on similar West African projects will allow exchange and connection between the networks around African tropical agroforestry as well as African agricultural innovation platforms. For CoS-SIS and the multi-stakeholder partnership framework, all tools and publications are open access and already online.

Finally, in WP4, the *Theory of Scaling* will prepare the upscaling of the project outputs and its impact monitoring thanks to indicators that match the results pathways and reflexive participatory analysis.

7. Ethics, gender and the inclusion of youth and young researchers

(max. 500 words) Word count: 419

Gender and youth are explicitly and deliberately addressed in the ToC and project activities (see part 3). Food insecurity is not just a failure of agriculture to produce sufficient food, but the outcome of insufficient income from other sectors, and a failure of development policies. Cash income generated by parklands contributes to increase the resilience of livelihood activities. The inter-generational transmission of knowledge and skills helps retain youth in rural areas and discourages migration to escape poverty. Gender and social differentiation are considered because men and women play different roles in rural agricultural and agroforestry production systems, households and communities (McGuire 2015), with significant consequences for their well-being, which is one of the main reasons for the economic underperformance of agriculture in poor countries (Patel 2012). Innovations may have potential to reduce poverty and unemployment among youths and adults alike (OECD/FAO 2016) of both sexes (World Bank 2008, Ingram et al. 2016). Our approach takes a disaggregated societal perspective of men, women and youths to take account of age and sex differences among stakeholders and the likely differentiated impacts, costs and benefits of the project.

Also, as far as possible, the RAMSESII consortium involves balance between female and male researchers and WP co-leaders and Project Members (PM), with a balance between co-leaders from Europe and Africa where appropriate and possible. The CPC is a woman, creating a positive role model.

Capacity building and training of African and European male and female students (mainly co-supervised masters between CIRAD-IRD-ISRA, WUR and INERA) and early-career scientists, as well as technicians and engineers, will be promoted in RAMSESII through the opportunities to use partner's equipment and data for long-term monitoring of agroecosystem functions and associated services at the four studied sites. Based on the long experience working together, the project will engage around twenty african MSc thesis students, some WUR and Montpellier University MSc thesis students, two african PhD (Tasks 2.4 and 4.1), and two post-PhD students (Task 2.1 and 3.1) who will be co-supervised by European and African scientists. The project will allow exchanges amongst students and their institutions and develop collaborative and training networks on agroforestry systems that include not only agronomic, environmental aspects and impacts on crop production and income but also local practical agroforestry practices and product uses for the four ecological, technical and socio-economic conditions.

Parklands creating knowledge and agricultural models applicable for sub-Saharan West Africa, RAMSESII thus contributes to connecting the networks and platforms on African

tropical forestry, agroforestry and African agricultural innovation systems (CoS SIS, PAR).

8. Implementation of feedback from the preliminary proposal stage

(max. 250 words) Word count:247

The reviewer's observation on the lack of competences on traditional ecological knowledge, especially the use of parklands for collection of medicinal plants and organisms is countered by the description of the project and team members, the tables clearly showing that INERA (Some-Dao M., Dibloni O.T., Zida I., Koura P.), ISRA (Sanogo D.), WUR (Bongers F., Ingram V.), and IRD (Serpantié G.) have competences on these aspects.

The observation on the "*wide scope of the planned studies which makes the realism of successful outcome a bit doubtful*" is countered by the choice to complement and build upon ongoing studies on the four studied parklands (part 2.2), and capitalize on existing results to maximize successful outcomes, while limiting new studies to those that are likely to have real added-value outcomes. The "*highly competent consortium*", includes a monitoring and evaluation specialist (Brouwers J.) as the ToC process is central to project management, allowing a continuous reflection and a common view of the issues at stake, maximizing reflexive outputs, thus ensuring realism of the expected outcomes.

Regarding the observation about the competences on institutions and land tenure issues, WP1 and WP3 cover the aspects of multi-level governance of land and tree products, resource competition and conflicts on land and tree tenure. Ouputs will be discussed with stakeholders using inclusive, participative approaches to find arrangements that favour **ISMSI** (part 5).

Students and young scientists are a key part in knowledge transfer in RAMSESII, as presented in part 7 and in the budget.

9. Date and signature of the coordinator and other consortium partners

CountryPartners	Institutions	Logos, date & signatures
France	Institut de Recherche pour le Développement (**IRD**) Dr. J-P Moatti IRD Chairman	I approve the participation of my institution in the full proposal *RAMSESII: Roles of Agroforestry in sustainable intensification of small farMs and food*, to be submitted to the LEAP-AGRI call on December 7, 2017. Signature Date 05/12/2017 Name: Jean-Paul MOATTI Position: Chairman Institution: Institut de Recherche pour le Développement
	Centre de coopération Internationale en Recherche agronomique pour le Développement (**CIRAD**) Dr. J-P Laclau Deputy Director of Joint research unit Eco&Sols	6th December 2017
The Netherlands	Wageningen univerisity & Research (**WUR**) Dr. V. Ingram Project Partner (**PP**)	the 28th November 2017
Burkina Faso	Institut de l'Environnement et Recherches Agricoles (**INERA**) Dr. H.O. Sanon Deputy Director	MESRSI-CNRST INERA Le Directeur Dr. Hadja Oumou SANON, Directeur PI 28 NOV 2017
	West African Science Service Center on Climate Change and Adapted Land Use (**WASCAL**) S. Sanfo Project Partner (**PP**)	23 rd November 2017
Senegal	Institut Sénégalais de Recherche Agricole (**ISRA**) General Director	Le Directeur Général de l'ISRA Dr Alioune FALL

	Global Shea Alliance (**GSA**) Marie Veyrier Associated partners (**AP**)		
International	Association pour la promotion des arbres fertilitaires, de l'agroforesterie et la foresterie (**APAF**) B. Devresse Associated partners (**AP**)		
	Birdlife International J. Garcia Morena Associated partners (**AP**)		04/dec/2017

10. Annexes

Annex 1: CVs consortium partners

CV partner IRD: SEGHIERI Josiane, born on 14 th August 1960, Research Director.

PhD (1990) in Physiology and Biology of Organisms and Populations, on “Savanna dynamics in northern Cameroon”, Montpellier University.

Research fellow since 1991 at IRD in Joint Research Unit (UMR) HydroSciences Montpellier (HSM) on woody plant functioning and adaptation in sub-Saharan Africa.

✦ 2012-2015: Co-coordinator for IRD of the SAFSE Project on “Search for trade-offs between production and ecosystem services provided by agroforestry systems”, co-funders: IRD-CIRAD.

✦ Since 2015: Facilitator of the network "Agroforestry in West Africa" : Niger, Benin, Burkina Faso, Senegal, Côte d'Ivoire.

✦ Member of the experts on Desertification list of the French Ministry of Foreign Affairs.

Best 5 peer-reviewed scientific publications:

Awessou K. B., Peugeot C., Rocheteau A., Seguis L., Do F., Seghieri J. 2017. *Agroforestry System* 91:403-413.

Issoufou H.B.A., Rambal S., Le Dantec V., Oï M., Saâdou M., Seghieri J. 2015. *Tree Physiology* 35: 197-208.

Velluet C., Demarty J., Cappeleare B., Braud H., Issoufou B., Boulain N., Ramier D., Mainassara I., Charvet G., Boucher M., Chazarin J-P. Oï M., Yahou H., Maidaji B., Arpin-Pont F., Benarrosh N., Mahamane A., Nazoumou Y., Favreau G., Seghieri J. 2014. *Hydrology and Earth System Sciences* 18: 5001-5024,

Issoufou H.B.A., Delzon S., Laurent J.P., Saâdou M., Mahamane A., Cappelaere B., Demarty J., Oï M., Rambal S., Seghieri J. 2013. *Trees, structure and function* 27:1011-1022.

Seghieri, J., Carreau, J., Boulain, N., (de) Rosnay, P., Arjounin, M., & Timouk, F. 2012. *Plant Ecology* 213: 861-870.

Best 5 selected non-scientific publications:

Seghieri J. 2017. Systèmes agroforestiers soudano-sahéliens : tradition ou innovation ?. *In*: Loireau M. & Khatra N.B., *La revue Liaison Énergie-Francophonie* Numéro 105, p. 92.

Seghieri J. & Harmand JM. 2015. Les vertes de l'Agroforesterie Tropicale. *Sciences au sud*, 77 : 42011.1

Seghieri J. & Vigouroux Y. 2011. Des racines à 40 m sous la surface. *Sciences au sud*, 61: 9.

Masse D. (coord.), Chotte J-L. (coord.), Scopel E. (coord.), Barnaud A., Barthès B., Berthouly C., Chapuis Lardy L., Seghieri J., Serpantié G., Vigouroux Y., et al. 2015. *Les Dossiers Thématiques* n°11, Montpellier, France.

CV partner CIRAD: JOURDAN Christophe, born on 17th January 1967, Senior researcher PhD (1995) in Physiology and Biology of Organisms and Populations, Montpellier University on “modelling of root system architecture and development of oil palm in Ivory Coast”. Research fellow since 1996 at CIRAD in Eco&Sols Joint Research Unit (UMR) Montpellier on Functional Ecology and Biogeochemistry of Soils and Agrosystems.

- Since 2014: Research team co-leader in Eco&Sols on Theme 2: Nutrients and Ecological Intensification – Understanding the ecological and biogeochemical processes determining the acquisition and use of nutrients by plants in agroecosystems.
- 2016-2019: Participant of the APLIM (Advanced Plant Life Imaging and Metrology) project. Agropolis Foundation, on root water fluxes through NMR imaging at field level.
- 2012-2015: Participant for CIRAD of the SAFSE Project on “Search for trade-offs between production and ecosystem services provided by agroforestry systems”, co-funders: IRD-CIRAD.
- 2010-2013: WP leader of ECOSFIX project on “Root ecosystemic services – hydraulic redistribution, C sequestration and soil fixation in Laos, Costa Rica, France”. ANR

Best 5 peer-reviewed scientific publications:

Pradier, C, Hinsinger, P, Laclau, JP, Bouillet, JP, Guerrini, IA, Gonçalves, JLM, Asensio, V, Abreu-Junior, CH and C Jourdan 2017 Rainfall reduction impacts rhizosphere biogeochemistry in eucalypts grown in a deep Ferralsol in Brazil. Plant Soil doi:10.1007/s11104-016-3107-7

Germon A, Cardinael R, Prieto I, Mao Z, Kim J, Stokes A, Dupraz C, Laclau J-P and Jourdan C 2016 Unexpected phenology and lifespan of shallow and deep fine roots of walnut trees grown in a silvoarable Mediterranean agroforestry system. Plant and Soil 401, 409-426. http://dx.doi.org/10.1007/s11104-015-2753-5

Cardinael R, Z Mao, I Prieto, A Stokes, C Dupraz, JH Kim and C Jourdan 2015. Competition with winter crops induces deeper rooting of walnut trees in a Mediterranean alley cropping agroforestry system. Plant and Soil 391 (1-2), 219-235. http://dx.doi.org/10.1007/s11104-015-2422-8

Levillain J, Thongo M'Bou A, Deleporte P, Saint-André L and Jourdan C 2011 Is the simple auger coring method reliable for below-ground standing biomass estimation in Eucalyptus forest plantations? Annals of Botany 108, 221-230

Jourdan, C, EV Silva, JLM Goncalves, J Ranger, RM Moreira, J-P Laclau, 2008. Fine root production and turnover in Brazilian Eucalyptus plantations under contrasting nitrogen fertilization regimes, Forest Ecol. Manage. 256, 396-404.

CV partner Wageningen University: INGRAM Verina born on 05 th November 1967, Assistant Professor. PhD (2014) on "How governance impacts the sustainability of livelihoods based on non-timber forest products in Cameroon", Univ. Amsterdam, The Netherlands.

- Since 2012: Senior Researcher, Forest & Nature Conservation Policy, Wageningen Economics, Wageningen University & Research (UR), Wageningen.
- Since 2016: Internat. Union of For. Res.Org. (IUFRO) Africa group member
- Since December 2014: International Forestry Review, Editorial Board member.
- Since 2009: Africa Study Centre Community, University of Leiden, Fellow.
- Since 2008: Tropical Forestry Association, since 2016: Member, board member.

Best 5 peer-reviewed scientific publications:

Ingram, V. (2017) 19(S1)IUFRO Special Project: World Forests, Society and Environment 2015-2018 *Shifting global development discourses: Implications for forests and livelihoods*: p. 1-18.

Ingram, V., M. Ewane, L. N. Ndumbe and A. Awono (2017). Forest Policy and Economics Special Issue; *Forest and Livelihoods: Assessment, Research, and Engagement*.

Arts, B., M. Buizer, L. Horlings, V. Ingram, C. van Oosten, Opdam P. (2017). *Annual Review of Environmental and Resources*,. 42: p. 439–63.

Ingram, V., P. Cronkleton, P. Levang, A. Degrande, R. Leakey and P. Van Damme (2014). Editorial: Special Edition. Forest and tree product value chains. *Forest, Trees and Livelihoods* 23 (1-2):1-5. http://dx.doi.org/10.1080/14728028.2014.892756 IFI SCI 0.3

Ingram, V., J. Schure, A. Awono and O. Ndoye (2014). Special Edition *Forest value chains. Forest, Trees and Livelihoods*. 23 (1-2): 67-86

Best 5 selected non-scientific publications

Awono, A., Ingram V. *et al.* (2013). Guide for small and medium enterprises in the sustainable non-timber forest product trade in Central Africa. Bogor, Indonesia, CIFOR.

Ingram V. *et al.* Republic of Cameroon. (2009). Guidance for a National Prunus africana Management Plan Cameroon: CIFOR-SNV-World Agroforestry Center-COMIFAC-GTZ.

Ingram, V. *et al.* (2017). NWFPs help to generate income for poor households. Living in and from the forests of Central Africa. O. Ndoye and P. Vantomme. Rome, FAO: 47-53.

Ingram, V. *et al.* (2017) Wild genetic resources (including non-timber forest products). In Handbook Of Agricultural Biodiversity. Eds. D. Hunter, L. Guarino, C. Spillane and P. C. McKeown. Routledge. S

Ingram, V., M. Haverhals, S. Petersen, M. Elias, B.S. Basnett, and S. Phosiso. (2016). Gender and forest, tree and agroforestry value chains - Evidence from literature. In Gender and Forests: Climate Change, Tenure, Value Chains, and Emerging Issues, Eds. C.JP Colfer and M. Elias. London: Earthscan

CV partner INERA: BASTIDE Brigitte, born on the 3th May 1961. Senior Researcher.

PhD (1988) in Physiology and Biology of Organisms and Populations, Montpellier University.Posdoctoral fellow (1990) University of California Riverside. Research fellow since 2000, in ecology at INERA (Burkina Faso).

- 2015-2017: Projet de restauration et amélioration de la productivité des peuplements de karité au Burkina Faso (Karité DK) Funder: Royal Danish Embassy.
- 2015-2017: Coordination of the INERA/OLVEA project on “Conservation, préservation et gestion durable de la ressource naturelle karité”. Private funder: Yves Rocher .
- 2013-2016: Coordination of the FCN/WAAPP project on “Valorisation en milieu paysan des acquis de la recherche pour lutter contre la dégradation et le vieillissement des peuplements de karité en fonction de la zone climatique du Burkina Faso”.
- 2007-2012: Professional Memberships : participating the project INNOVKAR “Innovative Tools and Techniques for Sustainable Use of Shea Tree in Sudano-Sahelian Zone” (Project INCO-CT-032037) research consortium.
- 1993-1999: Technical Assistant posted at Institut de Recherche en Biologie et Ecologie Tropicale (IRBET-CNRST Burkina Faso).

Best 5 peer-reviewed scientific publications:

Dao M., Diallo B.O., Tamini Z., Bastide B., Guinko S. 2006. *J. of Exp.Biol.* 2 (2): 70-76.

Bastide B., Ouedraogo S.J., 2008. *Bois et forêts des tropiques*, 296: 27-37.

Bastide B., , Ouedraogo S.J., 2009. *Sécheresse* en ligne, 5E et Sécheresse 20 (4): 1-6

Kaborée S.A., Bastide B., Boussim J.I. 2012. *Bois et Forêts des Tropiques*, 313 (3): 47-59.

Best 5 selected non-scientific publications

Ouedraogo S.J., Somé A.N., Bastide B., NEYA B., Sawadogo E., Bationo B. 1998. Projet PNUD/BKF/93/003A *Aménagement des forêts naturelles et Département Productions Forestières* INERA - Ouagadougou, 34 p.

Ouedraogo S.J., Bationo B.A., Bastide B., 2006. Gestion des forêts, feux de brousse et régénération de Detarium microcarpum Guill. et Per.. *Notre environnement* 32 : 14 -16.

Bastide B., Ouedraogo S.J., 2006. Gestion d’Acacia dudgeoni pour le bois-énergie dans les forêts soudano-sahéliennes. *Notre environnement* 34 : 14 – 16.

Bastide B.,Yaméogo/Gamene C. S., Bassirou B., Kafando E., Monné G., 2016. Produisez vous-mêmes vos karités dans vos pépinières villageoises !- Fiche technique WAAPP/INERA

Ouoba H., Bastide B. 2016. La Régénération Naturelle Assistée du karité ou Comment prendre soin de vos jeunes karités dans les champs ? Fiche technique WAAPP/INERA.

CV partner WASCAL: SANFO Safietou, born on the 8th January 1976, Senior Researcher PhD (2010) in economic Sciences (Agricultural Economics) , University of PARIS I, Pantheon Sorbonne, France. Research fellow since October 2010 in Agricultural Economist at WASCAL, working on impact of climate change on agriculture and adaptation strategies; Smallholders farming systemmodelling including risk ; Rural farmer's livelihood, risk management strategies, resilience and poverty alleviation; Agricultural policies and impact evaluation.

Best 5 peer-reviewed scientific publications:

Sanfo. S, *et al.* 2017. Climate and Environment Induced Migration in Southwest Burkina Faso, West Africa. American Meteorological Society. Weather climate and Society, DOI: 10.1175/WCAS-D-16-0065.1.

Sanfo, S.*et al.* 2017. Horticultural Production in Burkina Faso: A comprehensive socio economic analysis. Irrigation and Drainage. DOI:10.1002/ird.2158.

Sanfo, S. *et al.* 2017. "Rainfall Variability Adaptation Strategies: An Ex Ante Assessment of Farm Ponds in Southern Burkina Faso. Agricultural System. Agricultural Systems 152 (2017) 80–89.

Sanfo S. *et al.* 2016. Survey Data on Key Environmental Drivers of Farmers' Migration in Burkina Faso, Data Brief, 9:1013 -1019. http://dx.doi.org/10.1016/j.dib.2016.11.001.

Sanfo, S. & Gérard, F. 2012. Public policies for rural poverty alleviation: The case of agricultural households in the Plateau Central area of Burkina Faso. Agr. Syst. 110.

Best 5 selected non-scientific publications:

Bedru B., Kaboré E., Sawadogo E.R., Trucker J., Bossa A.Y. Sanfo, S., Fonta W. M. 2017: Technical Brief. WLE briefing ser. n°. 15. WIMI, CGIAR.

Sanfo, S., Gérard F, Fallot A and Antona M. 2014. *In*: *Resilience and development: mobilising for transformation*. Villeurbanne, p. 772. Resilience Alliance 2014, Montpellier, France.

Müller, M., Sanfo, S. & Laube, W. (2013). Impact of Changing Seasonal Rainfall Patterns on Rainy- Season Crop Production in the Guinea Savannah of West Africa Agricultural and Applied Economics Association 2013 Annual Meeting, August 4-6, 2013, Washington, D.C.

Sanfo, S., Barbier B., Mandé, T., 2008. Irrigation formelle et informelle pour la production de contre saison; Papier présenté au SAFID, Janvier, 2008.

CV partner ISRA: SANOGO Diaminatou, born on 31 december 1963, Senior Researcher; PhD (2015) in Ecology-Agroforestry, Université Cheikh Anta Diop, Dakar (Senegal);

- Since 2015: Director of the Centre National de Recherches Forestiers / Institut Sénégalaise de Recherches Agricoles (CNRF/ISRA);
- Since 2010; Researcher Associated in the World Agroforestry Research Center (ICRAF), Focal point of ICRAF in Senegal;
- Since 2016: Representative of the Centre National de Recherches at the National Committee on Climate Change (COMNACC); Representative of the Ministry of Agriculture and Rural Equipment to the Technical Committee of the Green Climate Fund;
- 2015-2018: National Coordinator of the project "Developing community-based climate for smart agriculture through participatory action research in five benchmark sites in West Africa: Senegal and Niger" - (PAR) ICRAF/CCAFS;

Best 5 peer-reviewed scientific publications:

Sanogo D. *et al.* 2017. *Agr. & Food Secur.* 6:13. DOI 10.1186/s40066-017-0091-y

Camara B.A., Drame M., Sanogo D. *et al.* 2017. *J. Appl. Biosci*.112: 11025-11034;

Sanogo D. *et al.* 2014. *Agron. Soc. Environ.* 2014 18(3), 339-352. http://popups.ulg.ac.be/1780-4507/index.php?id=11302.

Sanogo D. *et al.* 2015. *J. Appl. Biosci*. 85:7838-7847. http://dx.doi.org/10.4314/jab.v85i1.8, ttp://www.ajol.info/index.php/jab/article/view/113583.

Sanogo D. *et al.* 2013. *Afr. Nat. Plant Prod.* Vol. II. Juliani, H., *et al.*, ACS Symposium Series; Am. Chem. Soc. Washington, chap. 016, *pp.* 255-271. DOI: 10.1021/bk-2013-1127.ch016 ; http://pubs.acs.org/doi/abs/10.1021/bk-2013-1127.ch016.

Best 5 selected non-scientific publications:

Sanogo D, *et al.* 2016. The climate-smart village approach. CGIAR Res. Progr. Clim. Change, Agr. & Food Securi. http://hdl.handle.net/10568/78211. *In:* Etudes et documents ISRA, Vol. 12, N°1, 17 p.

Sanogo D *et al.* 2016. La Plateforme d'Innovation (PI): une approche participative d'appropriation des acquis de la recherche forestière et agroforesterie. *In*: Etudes et documents ISRA, Vol. 12, n°2, 4 p.

Sanogo D. 2016. Les *fermes du futur*, *In*: Cahiers d'information de l' ISRA Vol. 6, N°4, 4 p.

Sanogo D. *et al.* 2016. Modèle de village climato-Intelligent. *In*: Cahiers d'information de l' ISRA Vol. 6, n°3, 4 p.

Sanogo D. 2011. Expériences de stratégies de gestion des espaces sylvo-pastoraux inter-villageois dans le bassin arachidier du Sénégal. Etudes & documents ISRA, Vol. 9 n°1, 75 p.

CV Partner Birdlife: Jaime Garcia Moreno

GARCIA MORENO Jaime, born on 12th May 1966, International Programme Coordinator

PhD (1997) Evolutionary Biology at University of Copenhagen; postdocs at University of Michigan in Ann Arbor (1998-2000) and Max Planck Institute for Ornithology in Constance, Germany (2000-2005).

- Since 2016: International Programme Coordinator at BirdLife Netherlands.
- 2014-2016: Independent Consultant.
- 2011-2014: Executive Director and Conservation and Partnerships Director at Amphibian Survival Alliance.
- 2009-2011: Senior Technical Officer at Wetlands International HQ.
- 2005 -2009: Biodiversity Assessments and Species Conservation Director at Conservation International, Mexico and Central America Program.

Best 5 peer-reviewed scientific publications:

Zwarts, L., Bijlsma, R. G., van der Kamp, J., Sikkema, M., & Wymenga, E. 2015. Moreau's Paradox reversed, or why insectivorous birds reach high densities in savanna trees. Ardea 103: 123-144. doi: 10.5253/arde.v103i2.a2

Stout, J. C., de Bruijn, B., et al. Insect pollination improves yield of Shea (Vitellaria paradoxa subsp. paradoxa) in the agroforestry parklands of West Africa. Submitted to Journal of Pollination Ecology.

Best 5 selected non-scientific publications:

Tayleur, C. 09 March 2016. Shea, shea everywhere, but no insects left to eat. https://www.birdlife.org/europe-and-central-asia/news/shea-shea-everywhere-no-insects-left-eat

Van Oijen, D. 21 July 2016. Hoe koekjes, zeep en crème onze trekvogels kunnen helpen. https://www.vogelbescherming.nl/actueel/bericht/?bericht=1831

Djamila le Pair. 14 Nov 2016. Empowering women to make sustainable shea butter. http://www.birdlife.org/africa/news/empowering-women-make-sustainable-shea-butter

BirdLife International. October 2016. Trees for life: how birds and people profit (Leaflet to spread good practices – English and French versions available)

CV partner GSA: VEYRIER Marie, born on 2th September 1986, Development Director

Master in International Development Policy (2015) at Duke University; Master in Management (2008) at ESCP Europe;

- since 2017: Development Director at the Global Shea Alliance,
- 2015-2016: Project Manager at Datu Research
- 2014-2015: Guest Speaker for 3 seminars in Haiti to build capacity of senior government officials on project economic appraisal and public-private partnerships
- 2009 -2013: Business Operation Controller at Alstom

Best 5 selected non-scientific publications:

- GSA Sustainability Program: http://globalshea.com/uploads/files/sustainability_program/sustainability-program-english.compressed_501.pdf
- GSA 2016 Annual Report: http://globalshea.com/uploads/files/annual_reports/gsa-annual-report-2016_805.pdf
- GSA 2015 Annual Report: http://globalshea.com/uploads/files/annual_reports/gsa-annual-report-2015-v10_570.pdf
- Sustainable Shea Initiative: http://globalshea.com/news/past/163/Global-Shea-Alliance-and-USAID-Partner-for-Industry-Growth-and-Sustainability
- 2017 Conference Program: http://globalshea.com/uploads/files/shea_2017/shea2017_english_761.pdf

CV partner APAF: DEVRESSE Bruno, born on 13th November 1956, Executive director.

- 1991-1997: Development of different agroforestry techniques, inventor of the technical and methodological APAF concept, identification of fertilizer trees;
- 1998-2000: Project manager on "PAFVI (Programme d'Agroforesterie et Foresterie VIllageoise), extension of Agroforestry Techniques by Fertilizer Trees (F.T.) in 90 villages of the Kloto, Western Plateau region Togo", funder: Centre International de Formation des Cadres du Développement et Commission européenne;
- 1999-2002: Project manager on "PAFVI, extension of agroforestry techniques by F.T. in 92 villages -Akebou Wawa, Plateaux Togo West", funder: FED STABEX;
- 2001-2005: Technical assistant, stage manager on "PAFVI, extension of agroforestry techniques by F.T. in 550 villages in the Western Plateau and Togo maritime region", funder: FED;
- 2005-2007: Technical Assistant Coordinator, support and monitoring of agroforestry actions by F.T. in Togo and Burkina Faso, fundraising;
- 2008-2017: Executive director of APAF internationale, support and monitoring of agroforestry actions by the F.T. of the APAF network in Togo, Burkina, Senegal, Côte d'Ivoire, Cameroon, Mali. Fundraising and DRC feasibility study.

Best 5 selected non-scientific publications:

- Synthèse des connaissances scientifiques en matière de fertilisation symbiotique justifiant les techniques agroforestièresmises en oeuvre sur le programme PAFVI (programme d'agroforesterie villageoise)
- Le concept technique et méthodologique agroforestière mis au point et vulgarisé par l'ONG APAF.
- Grain de sel: Les arbres fertilitaires : base de l'agro-écologie en Afrique ? (http://www.inter-reseaux.org/IMG/pdf/gds63_16-17.pdf)
- L'Association pour la Promotion des Arbres Fertilitaires, de l'agroforesterie et la foresterie, l'amie de la Nature et des Humains;

(http://www.agroforesterie.fr/actualites/2017/documents/L-enquete-Mighty-Earth-Rapport-La-deforestation-amere-du-chocolat-retour-article-terrain-APAF.pdf

contribution au livre de René Billaz: "Faire du Sahel un pays de Cocagne", chapitre D.

- L'accroissement de la teneur en matière organique des sols: l'agroforesterie (https://firedusahelunpaysdecocagne.wordpress.com)

Annex 2: draft consortium agreement

Consortium Agreement

RAMSESII

Roles of Agroforestry in sustainable intensification of small farMs and food SEcurity of SocIetIes in West Africa

(draft December 2017)

The following *Participants*:

INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT

Public body

Having its registered office at: 44, boulevard de Dunkerque, CS 90009

13572 MARSEILLE Cedex 02

France

Represented by: Jean-Paul MOATTI

Function: Chairman

Hereafter referred to as "**IRD**"

Acting in its own name and on behalf of Dr. Josiane SEGHIERI within the scope of the Joint Research Unit 050 HydroSciences Montpellier HSM, managed by its director, Dr. Patrick SEYLER

AND

LA RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT

Public body, specifically French public industrial and commercial enterprise (EPIC),

Having its registered office at: 42 Rue Scheffer, 75016 Paris, FRANCE

Registered under number 331 596 270,

Represented by: its CEO, Mr. Michel Eddi, and by signatory empowerment by Mr. François-Xavier Côte, and by signatory empowerment by Mr. Jean-Paul Laclau

Function: vice director of the Joint Research Unit Eco&Sols

Hereafter referred to as "**CIRAD**"

AND

WAGENINGEN UNIVERSITY & RESEARCH

University

Having its registered office at: Droevendaalsesteeg 4, 6708 PB Wageningen, The Netherlands

Represented by: Machteld Roos (MSc)

Function: Director Operations Department of Environmental Sciences

Hereafter referred to as "**WUR**"

AND

INSTITUT DE L'ENVIRONNEMENT ET DE RECHERCHES AGRICOLES

Public body

Having its registered office at: 04 BP 8645 Ouagadougou 04, Burkina Faso

Represented by: Dr Hamidou Traoré

Function: Director

Hereafter referred to as "**INERA**"

AND

INSTITUT SENEGALAIS DE RECHERCHE AGRICOLES

[Legal statute?]

Having its registered office at: [Address line 1]

[Address line 2]

Senegal

Represented by:

Function: [Function of the representative]

Hereafter referred to as "**ISRA**"

AND

WEST AFRICAN SCIENCE SERVICE CENTER ON CLIMATE CHANGE AND ADAPTED LAND USE

International Research institution

Having its registered office at: 06 BP 9507 Ouagadougou 06, Burkina Faso

Burkina Faso

Represented by: Jimmy Adegoke

Function: Executive Director

Hereafter referred to as "**WASCAL**"

AND

BIRDLIFE

Non-profit

Having its registered office at: POSTBUS 925 3700 AX ZEIST' BOULEVARD 12 3707 BM ZEIST'

The Netherlands

Represented by: Robert KWAK

Function: Head of Conservation Department

Hereafter referred to as "**BIRDLIFE**"

AND

ASSOCIATION POUR LA PROMOTION DES ARBRES FERTILITAIRES, DE L'AGROFORESTERIE ET LA FORESTERIE INTERNATIONALE

Association low 1901

Having its registered office at: Arbousses-Bas 48110 Moissac vallée Française.

France.

Represented by: Bruno Devresse

Function: Executive director

Hereafter referred to as "**APAF**"

AND

GLOBAL SHEA ALLIANCE

Non-profit

Having its registered office at:	4th Street, Kuku Hill, 2nd floor Jubilee House, Osu, Accra
	Republic of Ghana
Represented by:	Marie VEYRIER
Function:	Development Director

Hereafter referred to as "**GSA**"

Hereafter IRD, CIRAD, WUR, INERA, ISRA, WASCAL, BIRDLIFE, APAF, GSA is individually referred to as a "Participant" and collectively as the "Participants".

Whereas

The research contemplated herein has arisen under the auspices of the ERA-NET LEAP-Agri, which is a network of ministries and funding organizations from 19 European and African countries with the ambition to strengthen the European and African research in the area and develop a common European and African research agenda concerning food and nutrition security as well as sustainable agriculture.

The Participants established, in reply to a call for proposals by LEAP-Agri, a Project called Roles of Agroforestry in sustainable intensification of small farMs and food SEcurity of SocIetIes in West Africa (RAMSESII), Project Leap-Agri 215;

And as this Project has been selected for funding;

The Project participants now wish to set the terms and conditions for the implementation of their Project, and their respective rights and obligations resulting there from, by means of this Agreement.

The following has been agreed upon:

Article 1: Definitions

When used in this Agreement, the following words and expressions, beginning with a capital letter, have the following respective meanings:

- ERA-Net LEAP-Agri: means the ERA-NET "A **L**ong term **E**U-**A**frica research and innovation **P**artnership on food and nutrition security and sustainable **Agri**culture".

- Agreement: means this Agreement and its Appendices, as well as any riders;

- Committee: means the management body for the Project, created by, and comprised of, Project Participants as listed in Appendix 2;

- Confidential Information: means any kind of information and/or data, in any form, that is in the possession of one of the Participants and which is disclosed by that Participant to the other Participant for carrying out the Project or of which the other Participant becomes aware in connection with this contract, either in writing, verbally or by any other means of disclosure, and which is clearly marked as confidential on the relevant medium or, in the case of a verbal disclosure, which the disclosing Participant verbally stipulates is confidential and subsequently provides written confirmation to that effect within ten (10) days.

- **Coordinator**: means the Project Coordinator; the lead Participant of the Project;

- Field of Application: to be defined on a case-by-case basis;

- New Knowledge: means any kind of information, knowledge, procedures, technologies, including know-how, software, biological material, drawings, chemicals and/or all other types of information, regardless of the medium in which they are stored, as well as all related rights, obtained or developed by the Participants pursuant to the RAMSESII Project implementation;

- Own Knowledge: means any and all technical and/or scientific information and knowledge and/or any and all other type of information, in any form whatsoever, whether patentable or not, and/or whether actually patented or not, and all the related rights, belonging to a Participant or held by the latter prior to the effective date of the Agreement.

The Participants' Own Knowledge at the effective date of the Agreement is specified in Appendix 2 hereto. During the performance of the Agreement, each Participant is responsible for advising the other Participants, in writing, of the creation of further Own Knowledge and for proving, where applicable, the latter's independence vis-à-vis the Project. In this case, Appendix 2 shall be supplemented;

- Participant: means a body (institution, organisation, enterprise) participating within this Project, here IRD, CIRAD, WUR, INERA, ISRA, WASCAL, BIRDLIFE, APAF, GSA;

- Project: means the research projet "RAMSESII" described in Appendix X hereto;

- Work: means the Work carried-out by the Participants pursuant to the Project under this Agreement, as listed in Appendix 1 hereto.

Article 2: Purpose

The purpose of this Agreement is:

- to set forth the terms and conditions for implementing the Project;
- to set the rules for the transfer of the intellectual property attached to the New Knowledge;
- to set the general terms and conditions for industrial and commercial use and exploitation of the Own and New Knowledge.

Article 3: Governance Structure

3.1 Coordinator

3.1.1 Appointment of the Coordinator

With the Participants' joint agreement, Dr. Josiane SEGHIERI is hereby appointed Project Coordinator of the RAMSES Project (215 Leap-Agri).

3.1.2 Coordinator's Role

The Coordinator shall be responsible for chairing the Committee and taking all actions to enable proper decision making by this decision body.

The Coordinator shall be the intermediary between the Parties and LEAP-Agri secretariat and shall perform all tasks assigned to it as described in this Consortium Agreement.

The Coordinator has the following duties

- he/she sends correspondence of joint interest to the other Participants within a reasonable timeframe so as to ensure the Project's due and proper progress;
- he/she monitors the compliance by the Participants with their obligations;
- he/she centralises the Participants interim reports and forwards them together with a summary, every 12 month(s) [e.g. every 6 months] to .....;
- within two months of the Project's expiry date, he/she shall send a single final report listing all the results achieved to LEAP-Agri Call Secretariat.....;
- he/she sends requests for changes to the Project to LEAP-Agri Call Secretariat;
- he/she advises LEAP-Agri of any problems in implementing the Project, in particular, when a Participant decides to terminate their share of the Work for which it is responsible for or when the Participants request another Participant's involvement in the Project.

If one or more of the Participants is late in submission of any deliverable, the Coordinator may nevertheless submit the other Participants' deliverables and all other documents required by LEAP-Agri.

3.1.3 Participants' obligations vis-à-vis the Coordinator

Within the lead-times provided for, each Participant has the following obligations:

- to provide elements enabling the Coordinator to reply to any requests from LEAP-Agri;

- to advise the Coordinator of the progress of the work that it is carrying-out, at a frequency that shall be decided upon by joint agreement within the Committee;
- to send the interim reports destined for LEAP-Agri at least 2 weeks before the deadline to the Coordinator and the elements required to draw-up the single final report;
- to immediately inform the Coordinator of any problem that may compromise the normal implementation of the Project.

3.2 Committee's Role

The Committee is the decision-implementing body of the project. It consists of representatives of each Participant, as listed in Appendix X.

3.2.1 Committee's Role

The Committee will be in charge of taking all measures, in addition to the contractual provisions already stipulated, necessary for the development of the present collaboration and the implementation of the Project. The Committee is responsible for the political and strategic orientation of the Work. It makes sure that the strategy adopted for the Project Is preserved. The Committee acts by decisions or advices.

In particular, the decision power of the Committee concerns:

- the political and strategic orientation of the Work. The Committee cannot decide to extend or cancel the Project,

- the progress of the Work Packages in accordance with the Project defined in Appendix 1,

- the publication and dissemination policy : the Committee cannot delay a publication without fair reason as set forth in Article 7,

- the arbitration, in case of a deadlock situation within a Work Package, upon consultation of the corresponding of the Work Package Leader(s);

The Committee formulates proposals to the Parties, which will take decisions, among other about:

- Extension or reorientation of the Project or the budget. In that event, the Coordinator will submit a proposal to LEAP-Agri and this proposal should be agreed by LEAP-Agri and the National Agencies funding the Project.

- Measures towards defaulting Party, following rules as provided in Article 10,

- Intellectual property rights,

- Use and exploitation of the Results,

- Dispute of technical nature, upon request of the Parties.

3.3 Associated Participants' Role

Birlife will participate in the three key meetings of the project: kick-off in Ouagadougou, mid-term in Dakar, and end of project in Montpellier. BirdLife will playa role in the work packages 3 and 4, which relate to the definition and implementation of indicat rs, and the dissemination of outputs of the project.

APAF is committed to attending meetings, from kikoff to Ouagadougou, midterm to Dakar, end of project in Montpellier. APAF will work on the definition of indicators and the participatory approach of WP 3 and 4. It will participate in the implementation of monitoring of indicators after project.

The GSA will participate to the planning and closing project meetings (either in-person or remotely). The GSA will contribute to the dissemination of the project's results. Dissemination will take place through presentation and discussion at the GSA International Conference which takes place annually in West Africa, and at two country-level workshops, as well as through online channels

Article 4: Financial Terms and Conditions

Each Participant receives funding relating to its share of the Work directly from the (National) Agency responsible for that Participant and according to the provisions of that Agency's decision to award aid. By accepting national aid, each Participant is required to abide with the rules and regulations concerning project funding in its own country and by the concerned Agency. The articles set down in this Agreement do not replace, impinge, impede or otherwise impact the (national) rules and regulations which apply to each Participant.

The Participants shall, if necessary, individually provide the additional funding required in order to carry-out their share of the Work.

Article 5: Intellectual Property

5.1 Own Knowledge

Each Participant retains full and total ownership of its Own Knowledge.

5.2 New Knowledge belonging to one Participant

New Knowledge created alone by a single Participant belongs to that Participant and any resulting new patents shall only be registered in the name, and at the expense, of said Participant and at its sole initiative.

5.3 Joint New Knowledge

5.3.1 Ownership principle

In the event of New Knowledge being created by the staff of two or more Participants without being able to assess the individual contributions of these in obtaining such knowledge, this New Knowledge, hereafter referred to as "Joint New Knowledge", shall be jointly owned by these Participants (who are in turn hereafter referred to as the "Co-Owner Participants") proportionally to their intellectual, human, material and financial contributions, unless said Participants contractually agree to having the related property rights being transferred to one of them.

In the event of New Knowledge being created solely by a laboratory which is a joint research structure without corporate status, constituted by several Participants, the latter shall be deemed as being the owners of this New Knowledge, in accordance with the agreements executed between them.

In the event of Joint New Knowledge being created by the staff of at least two laboratories, each of which is a joint research structure, constituted by different Participants, ownership of the Joint New Knowledge shall be shared between the Participants which are the trustees of said joint research structures proportionally to their intellectual, human, material and financial contributions, it being hereby stipulated that, within each joint research structure, the Participants constituting said joint research structure shall be personally responsible for the breakdown of the proportion of ownership between them, in accordance with the agreements executed between them.

Any and all Joint New Knowledge consisting of a new patent, software or other knowledge protected by an intellectual property right, shall be subject to rules of co-ownership, that shall be drawn-up between the Co-Owner Participants as soon as necessary and, in all cases, prior to any and all industrial and/or commercial use.

5.3.2 Patentable Joint New Knowledge

The Co-Owner Participants [in cooperation with the Associated Participant(s)] of the patentable Joint New Knowledge shall decide whether the latter shall be subject to patent applications filed/registered in their joint names and shall designate the Participant from amongst them which shall be responsible for accomplishing the filing/registration formalities and for maintaining the patent in force.

The expenses relating to filing/registration, obtaining and maintaining the new patents in force under co-ownership arrangements shall be borne by the Co-Owner Participants according to their share of ownership as set forth in Article 5.3.1 hereinabove.

Should a Co-Owner Participant waive its entitlement to file/register, continue with a registration procedure or maintain one or several new patents in force, it shall inform the other Co-Owner Participants in due time so that the latter may file/register in their own names, and continue with the procedure for registering or maintaining said new patents in force, at their own expense and for their own benefit. The desisting Participant undertakes to sign, or have signed, any and all documents required to enable the other Co-Owner Participants to become sole co-owners of the new patent(s) in question for the relevant country or countries.

A Co-Owner Participant shall be deemed to have relinquished its rights over a new patent sixty (60) days following receipt of a registered letter with acknowledgement of receipt requesting it to give its decision in this respect, sent by the Co-Owner Participant responsible for accomplishing the formalities relating to filing/registration and maintaining the patents in force, as referred to in the first paragraph of this Article.

It is hereby stipulated that the waiving Participant shall not be able to claim any compensation as regards the use of the new patent(s) in question in the relevant country or countries.

Each Co-Owner Participant shall be personally responsible for any compensation for its inventors.

The Associated Participant could be a Co-Owner Participant, or could hold the privilege of decision on the exploitation of results, with the agreement of all the Participants, in case it is not a Co-Owner of Joint New Knowledge.

Article 6: Principe of Use and Usage

6.1 Use and Usage of Own Knowledge

Rules related to ownership and protection of Knowledge described under Article 5 shall apply. The following rules are complementary to these.

6.1.1 Each Participant shall dispose freely of its Own Knowledge.

6.1.2 Use for Carrying-out the Work

In order to carry-out the Work, and for this sole purpose, each Participant grants a non-exclusive, non-assignable right, which may not be sub-licensed, and without financial consideration, to each of the other Participants, to use its Own Knowledge, provided said Own Knowledge is required for carrying-out its share of the Work.

Such Own Knowledge is provided by the Participant holding it at the express request of the other Participant and shall be considered as Confidential Information under the terms and conditions of Article 7.1 of the Agreement.

More specifically, when this Own Knowledge is software, unless there are provisions to the contrary in a licensing agreement executed between the relevant Participants, the Participant receiving such Own Knowledge may only use it on its own equipment and shall only be authorised to carry-out the reproduction that is strictly required by the loading, displaying, running, transferring and storing of this software for the sole purpose of its use to carry-out its share of the Work, and for making a back-up copy. The Participant receiving such Own Knowledge undertakes to refrain from using this software in any other manner and, in particular, from lending or disclosing it to third participants, unless it has the prior authorisation of the owner Participant, and from any and all use. The right of use thus granted shall not provide access to the source codes of the software in question without the prior, written authorisation of the Participant holding the rights over said software.

6.1.3 Use for Commercial Purposes

Each of the Participants undertakes to grant to the other Participants, following an express request from the latter and subject to third participant rights, a non-exclusive, non-assignable right that may not be sub-licensed, to use its Own Knowledge as required to enhance the New Knowledge, under the commercial

market conditions for the Field of Application in question. Said commercial conditions and the terms of this licence shall be negotiated prior to any and all industrial and/or commercial use and shall be subject to a licensing agreement executed between the relevant Participants.

More specifically, when this Own Knowledge is software, the Participant receiving it may only use it on its own equipment and shall only be authorised to carry-out the reproduction that is strictly required by the loading, displaying, running, transferring and storing of this software for the sole purpose of using it to use its New Knowledge, and for making a back-up.

6.2 Use and Usage of the New Knowledge and the Joint New Knowledge

6.2.1 General Principles

Subject to the provisions of Article 6.2.5 hereinafter, each Participant may freely use, exploit and/or have exploited, the New Knowledge that it owns under Article 5 hereof.

The Participants undertake to take all appropriate measures, in particular, vis-à-vis their staff and/or any subcontractors, to enable them to grant the other Participants the rights of use and usage of the New Knowledge or the Joint New Knowledge, under the terms and conditions provided for in the Agreement.

6.2.2 Use for Carrying-out the Work

Each Participant grants a non-exclusive, non-assignable right, that may not be sub-licensed, and without financial consideration, to the other Participants, to use its New Knowledge for the sole purpose of carrying-out their share of the Works. The conditions for exercising this right of use are the same as those provided for in Article 6.1.2 hereinabove relating to the use of Own Knowledge.

In the case of software, the Participant receiving such New Knowledge may only use it on its own equipment and shall only be authorised to carry-out the

reproduction that is strictly required by the loading, displaying, running, transferring and storing of this software for the sole purpose of its use to carry-out its share of the Work, and for making a back-up copy.

6.2.3 Use for Research

Each Participant may use, freely and free-of-charge, at its request, the New Knowledge belonging to the other Participants solely for its own research requirements and pursuant to research collaboration with third participants, to the exclusion of any and all direct and/or indirect use for commercial purposes.

If the New Knowledge thus requested is constituted of software, its furnishing shall be subject to a written agreement between the Participants in question that shall specify the terms and conditions of use, it being hereby stipulated that the rights of use granted in this manner shall not provide access to the source codes without the express agreement of the owner Participant or the Co-Owner.

6.2.4 Use of the Joint New Knowledge

The Co-Owner Participants of the Joint New Knowledge shall specify the terms and conditions for its use pursuant to an enhancement agreement prior to any and all industrial and commercial use or, for new patents subject to joint ownership, pursuant to rules of co-ownership as referred to in Article 5.3.1 hereinabove and in compliance with the principles set forth in Article 6.2.5.

As of now, the Participants agree that any direct and/or indirect use by a Co-Owner Participant of the Joint New Knowledge shall be subject to financial compensation being paid to the other Co-Owner Participants according to terms and conditions set forth subsequently in the abovementioned enhancement agreement or in the rules of co-ownership, without prejudice to Article 6.2.5 hereinafter.

When the Joint New Knowledge consists of software, the prior agreement of the other Co-Owner Participants shall be required if the planned use shall lead to communication of the source codes.

6.2.5 Use of the New Knowledge and the Joint New Knowledge by another Participant

6.2.5.1 For a term of eighteen (18) months as from the Agreement's expiry or termination date, each owner Participant or Co-Owner Participant undertakes to grant a non-exclusive, non-assignable right, without entitlement to sub-licence, for use of its New Knowledge within a Field of Application to any other Participant that may so request, provided such is required by the Participant making the request in order to use its own New Knowledge. Said right shall be granted under preferential terms (i.e. more favourable than the commercial market conditions for the Field of Application in question) or under any and all other conditions jointly agreed to by the Participants. The preferential terms and the terms and conditions of the licence shall be negotiated prior to any and all industrial and/or commercial use and shall be subject to a licensing agreement executed between the relevant Participants.

In the case of software, the Participant receiving such New Knowledge may only use it on its own equipment and shall only be authorised to carry-out the reproduction that is strictly required by the loading, displaying, running, transferring and storing of this software for the sole purpose of using it to use New Knowledge, and for making a back-up.

In the event that no licensing agreement is executed between the Participants under the foregoing terms and conditions within eighteen (18) months of the Agreement's expiry or termination date, the abovementioned commitment shall lapse and the owner Participant or Co-Owner Participant shall again be free to use the New Knowledge and/or have it used exclusively, subject to the agreement of the other Co-Owner Participants for Joint New Knowledge.

Article 7: Confidentiality - Publications

7.1 Confidentiality

7.1.1 Each Participant shall only provide the other Participants with the Confidential Information that it deems to be required for implementation of the Project, subject to third participant rights.

7.1.2 No provision of the Agreement may be construed as obliging any Participant to disclose Confidential Information to another Participant, with the exception of the information required for implementation of the Project.

7.1.3 The Participant which receives Confidential Information from one of the other Participants undertakes, for the term of the Agreement and for five (5) years following its termination or expiry, to ensure that the Confidential Information originating from the Participant disclosing it:

- is kept strictly confidential and is protected in the same manner as its own Confidential Information;
- is only provided to the members of its staff or subcontractors which have to be familiar therewith and is only used for the purposes set forth in the Agreement.

Any and all other disclosure or use of the Confidential Information shall require the prior, written agreement of the Participant disclosing it.

7.1.4 All the Confidential Information and its reproductions, sent by a Participant to another pursuant to the Agreement shall remain the property of the Participant disclosing it, subject to third participant rights, and shall be immediately returned to the latter at its request.

7.1.5 The Participant receiving the Confidential Information may disclose Confidential Information for which it is able to provide proof:

- that it was in the public domain prior or subsequent to its disclosure to it, and without any negligence being attributable to it;
- that use or disclosure was authorised in writing by the Participant from which it originated;

- that it was developed independently and in good faith by the staff of the Participant receiving it without such staff having access to said Confidential Information.
- that it was already in its possession prior the execution of the Agreement;
- that it was legally received from a third participant.

7.1.6 No provision of this Agreement implies:

- a waiver of protection of Confidential Information by a patent or by any and all other intellectual property right by the Participant disclosing it;
- a transfer of any right over this information by the Participant disclosing it in favour of the other Participants.

7.2 Publications - Communications

7.2.1 Any publication or communication as authorised in application of Article 6.1 must acknowledge the receipt of funding under the auspices of LEAP-Agri. such as: "These results have been achieved within the framework of the Era-Net LEAP-Agri call on sustainable agriculture and aquaculture and on food and nutrition security, with funding from the National Agencies concerned".

7.2.2 Each Participant undertakes not to publish, in any manner whatsoever, the Own Knowledge and the New Knowledge of other Participants with which it may have familiarised itself, provided such information is not in the public domain or if said Participant has not obtained the prior agreement of the Participant owning that Own or New Knowledge in question.

7.2.3 Any planned publication or communication of information relating to the Work by one of the Participants shall be subject, during the term of the Agreement and for two (2) years following its expiry or termination date, to the prior and written agreement of the other Participants.

The Participants shall announce their decision within a maximum timeframe of one (1) month as from the request-notification date; said decision may consist of:

- unreserved acceptance of the planned publication or communication; or
- a request for changes, in particular if some of the information contained in the planned publication or communication may compromise the industrial and commercial use of the Own and/or New Knowledge, or a request that the publication or communication be postponed if such would seem to be dictated by actual and serious reasons, in particular if the information contained in the planned publication or communication needs to be protected as industrial property.

Should a Participant fail to reply within this timeframe, it shall be deemed to have given its agreement. Nevertheless, eighteen (18) months after the initial submission of the planned publication or communication in question, none of the Participants may refuse to agree to publication or communication, unless the information that shall be subject to said publication or communication has strategic scientific, industrial or commercial interest for the business activities of one of the Participants.

Such publications and communications shall mention the contribution of each Participant in implementing the Project as well as the assistance provided by LEAP-Agri.

7.2.4 The provisions of this Article 7.2 shall not remove or prevent:

- either the obligation binding upon all persons involved in the Project to present an activity report to the organisation to which they report. In this respect, the publication of Confidential Information is limited to those bodies which need to be familiar therewith, provided they undertake to comply with the provisions relating to confidentiality;
- or the defence of theses by researchers involved in the Project. Such defence is organised in compliance with university regulations and the provisions relating to confidentiality. Where applicable, it may take place in camera and each member of the examining board shall be bound by a non-disclosure commitment.

7.2.5 The publications and communications authorised in application of Article 7.1 will be sent, once published or communicated, to LEAP-Agri.

Article 8: Liability - Insurance

8.1 General Provisions

8.1.1 Each Participant undertakes to carry-out its share of the Work in accordance with the obligation of due care binding upon it.

8.1.2 The Participants mutually waive entitlement to claim compensation from each other for consequential loss (loss of production, opportunity cost, etc.) that may occur pursuant to the Agreement.

8.2 Participants' Staff

Each Participant shall pay for covering its own staff in accordance with applicable legislation in respect of social security, industrial accident and industrial disease schemes to which it is affiliated, and shall carry-out the formalities for which is it responsible.

8.3 Damage/Loss Caused to Participants' Property

Under the conditions of ordinary law, each Participant is responsible for the damage/loss caused by it to another Participant's moveable or immoveable property, owing to, or during the performance of, the Agreement.

8.4 Damage/Loss Caused to Third Parties

For that which concerns it, each Participant shall bear all the financial consequences of the civil liability that it incurs under ordinary law, owing to any and all bodily injury or physical damage caused to third parties during the Work carried-out pursuant to the Agreement.

8.5 Insurance

As an when required, each Participant shall take-out, and maintain effective, the insurance policies providing cover for any damage/loss to property or persons which may occur pursuant to the performance of the Agreement.

8.6 Exclusion of Liability Attributable to Own and New Knowledge

The Own or New Knowledge and/or other information disclosed by one of the Participants to any other Participant pursuant to performance of the Agreement is provided "as is", without any guarantee of any nature whatsoever.

Such knowledge and information is used by the Participants pursuant to the Agreement at their sole expense and respective risk and, consequently, no Participant may institute legal proceedings against another, in any capacity and on any grounds whatsoever, owing to the use of said knowledge and information.

Article 9: Term

The Agreement is executed for a XX month term and shall take effect as from….

The provisions of Articles 5, 6 and 7 hereinabove shall survive for their own term, notwithstanding the expiry or termination of the Agreement.

Article 10: Termination

In the event that a Participant were to breach its obligations hereunder, the other Participants may, subject to the agreement of LEAP-Agri and the National Agencies funding the Project, terminate the Agreement vis-à-vis the defaulting Participant if, within 30 days of a registered letter with acknowledgment of receipt having been sent to the Participant and the corresponding National Funding Agency, the defaulting Participant has still failed to comply with its obligations. The termination decision must be adopted by a unanimous vote from

the non-defaulting Participants within the Committee, and has to be validated by LEAP-Agri and all the National Agencies funding the project.

In the event of a Participant failing to meet its obligations to the National Agency supplying the funding for its Work, the National Agency reserves the right to terminate the defaulting participant according to the rules and regulations in place in that Participant's country. In such a case, the National Agency will inform LEAP-Agri of its decision who in turn will inform the Coordinator.

In either case, the remaining Participants may elect either to assume the Work of the defaulting Participant themselves or to entrust a third participant with all or part of the Work to be carried-out. In both situations, this can only be undertaken with the explicit consent of LEAP-Agri and the National Agencies funding the project.

The defaulting Participant undertakes to provide, free-of-charge, the other Participants or the substitute third participant with all the information required to continue with implementation of the Project in its stead.

The exercising of this termination right shall not discharge the defaulting Participant from complying with its contractual obligations until the effective termination date, subject to any damage/loss that may be suffered by the other Participants owing to the partial termination of the Agreement.

Article 11: Force Majeure

11.1 "Force majeure" means any unforeseeable and exceptional event affecting performance of the Agreement, which is outside the control of the Participants, and which cannot be avoided in spite of the efforts which the Participants may reasonably make.

11.2 The Participant invoking an event of force majeure shall advise the other Participants thereof within seven (7) days of the occurrence of the said event. The Coordinator shall then inform LEAP-Agri immediately.

11.3 Where applicable, the lead-times for carrying-out the Work may be extended by joint agreement between the Participants and LEAP-Agri and the National Agencies funding the Project.

Article 12: *Intuitu personae*

The Agreement is executed intuitu personae. Consequently, no Participant is authorised to transfer all or part of the rights and obligations hereunder to a third participant without the prior and written agreement of the other Participants and of the Consortium.

Article 13: Governing Law – Disputes

13.1 The Agreement is governed by European rules and laws and the National Contracts and decisions signed concerning each participant's national funding.

13.2 In the event of a disagreement as regards the interpretation or performance of the Agreement, the Participants shall endeavour to settle their dispute out-of-court through the Committee, and subsequently through their respective direction.

Should the disagreement persist, the matter shall be referred to the European Courts having jurisdiction.

Appendices:

The following documents are appended to the Agreement and form an integral part thereof:

- **Appendix 1: RAMESII project and work packages**
- **Appendix 2: Committee Representatives**
- **Appendix 3: Participants' Own Knowledge**

In the event of a conflict or difference between the body of the Agreement and one of its Appendices, the body of the Agreement shall take precedence.

Executed in ……, on……,
In x originals [one for each signatory Participant]

For Participant **IRD**

Jean-Paul MOATTI

Chairman

[*Signature*]

For Participant CIRAD [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

For Participant WUR [*For the signatory partner establishments*]

Matcheld Roos

Louise Fresco

Rens Buchwaldt

Wageningen University & Research

[*Signature*]

For Participant INERA [*For the signatory partner establishments*]

Dr Hamidou Traoré

Director

For Participant ISRA [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

For Participant WASCAL [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

For Associated Participant Birdlife [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

For Associated Participant APAF [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

For Associated Participant GSA [*For the signatory partner establishments*]

[*Name*] [*Name*]

[*Capacity*] [*Capacity*]

[*Signature*] [*Signature*]

[*To be completed by each participant*]

Appendix 1: RAMSESII project description

Appendix 2
Committee Representatives

Name	Partner	Country
Dr. J. Seghieri	IRD	France
Dr. C. Jourdan	CIRAD	France
Dr Verina Ingram	Wageningen University & Research (WUR)	Netherlands
Dr. B. Bastide	INERA	Burkina Faso
Dr. S. Sanfo	WASCAL	Burkina Faso
Dr. D. Sanogo	ISRA	Senegal

Appendix 3:

Participants' Own Knowledge

Partner name : IRD

UMR HSM, ECO&SOLS, GRED, ESPACE DEV,

The partner IRD has specific knowledge, skills and means in economy, social sciences, anthropology, agronomy, ecology, and bioclimatilogy especially:

- Tree functional traits and impacts
- Crop performances
- Local farmers knowledge, perceptions, and practices,
- Land tenure and governance
- Gender roles in rural economy
- Demography
- Farmers attachment
- Remote sensing

Partner name :CIRAD
UMR ECO&SOLS, AÏDA autre ?
The partner IRD has specific knowledge, skills and means in xxxxxxxxxxxxxxxx especially:

- xxxx
- xxxx
- xxxx
- xxxx

Partner name : WUR
Forest & Nature Conservation Policy Group (FNP) and Forest Ecology & Management (FEM) - Environmental Sciences Group: Centre for Development & Innovation (CDI); Wageningen Economic Research

The partner WUR has specific knowledge, skills and means in, especially:

- Project management and coordination
- Agroforestry & forestry economics, products and commodities, value chains, incomes its distribution
- Forest, biodiversity and climate change governance, multi-level governance
- Participative action research approaches

- Forest ecology, tree functional traits and tree performance, non-timber forest products
- Local natural resource and environmental management
- CoS SIS
- Gender
- Capacity development
- Institutional change
- Education

Partner name : INERA

Département Environnement et Forêts, Département Gestion des Ressources Naturellels/Systèmes de Production

The partner INERA has specific knowledge, skills and means in Ecology and social sciences especially:

- Agroforestry
- Ecophysiology
- Tree regeneration

Partner name : ISRA

CNRF, autres ?

The partner ISRA has specific knowledge, skills and means in xxxxxxxxxxxxxx especially:

- xxxx
- xxxx
- xxxx
- xxxx

Partner name : WASCAL

The partner WASCAL has specific knowledge, skills and means in xxxxxxxxxxxxx especially:

- xxxx
- xxxx
- xxxx
- xxxx

Partner name : Birdlife

The partner Birdlife has specific knowledge, skills and means in xxxxxxxxxxxxxx especially:

- xxxx
- xxxx
- xxxx
- xxxx

Partner name : APAF

The partner APAF has specific knowledge, skills and means in agroforestry especially:

APAF is an association created in 1992 in Togo. She is specialized in the extension of agroforestry and forestry techniques in African peasant environment. APAF has developed and popularized a technical and methodological concept which is as follows:
From the point of view of agroforestry and forestry techniques, it is essentially a matter of introducing fertile or forest trees in the fields of peasants and other places of afforestation, by applying the techniques of natural regeneration assisted joined where it is necessary, to complimentation systems.
With regard to village intervention methodology, it is a question of putting into practice a participative and voluntary approach including the training of peasants in different agroforestry and forestry techniques, whether in their individual or collective fields, in their areas of afforestation as well as in village nurseries. It is a "self-centered" development action on the active participation of those concerned.
APAF masters the extension and teaching in the African village environment of:

- sensitization to the problems of degradation of natural resources, agroforestry and forestry techniques,
- dissemination of nursery techniques with inoculations of bacteria and mycorrhizae,
- selections, sizes, pruning of trees, assisted natural regeneration,
- methods of cultivation and breeding with associated trees, hedge techniques,
- economical watering techniques, protection techniques against the straying of animals,
- techniques of organizations fighting against bush fires,

The APAF Senegal and Burkina Faso were created respectively in 2013 and 2005. Each with an executive director and technical advisors, and logistical means.

Partner name : GSA

The partner GSA has specific knowledge, skills and means in xxxxxxxxxxxxxx especially:

- xxxx
- xxxx
- xxxx
- xxxx

ANNEX 3: RAMSESII Impact Pathway diagram with indicators at output and outcome level

Research outputs	Indicators	Research outcomes	Indicators	Impact
WP1 Knowledge on **drivers** of Parklands at farm, village and landscape scales	# of resilient and climate smart farming systems identified, based on four agroforestry systems, stronger parkland dynamics and articulated ecosystem services. # of publications on relationships between agroforestry cultivated area and changes in demography, ecological situation, policies, markets, social and economic priorities, etc.	**Sustainable intensification of agroforestry products** that are part of the resilient farm, village and landscape systems	Increase in food and agroforestry production Increase in farm income Diversification of products Increased stability of production	**Improved food security** (Incidence of rural poverty, hunger and malnutrition are reduced) From local to Sub regional: Contribution to achieving **SDGs*** N° **2** (zero hunger) & **3** (good health & well-being) ***Sustainable Development Goals**
WP2 Quantification of ecosystem services: Provisioning of agroforestry products, Supporting (nutrient and water cycling, primary production, etc.) and Regulating (microclimate, nutrient and water flows, disease, etc.**)**	# of publications identifying new ways of parkland management (with ref. to updated tree management to cater for stakeholder priorities, according to parkland type, its ecological situation, and the farm economic environment)	**More resilient agroforestry landscapes**	Increased ecosystem services Diversification of products Increased stability of production Decrease in input use for crop production	**Agroforestry landscapes prosper and regenerate** (rate of deforestation decreased as energy needs are met in a carbon neutral way, soils and soil fertility are maintained) From local to global: Contribution to achieving **SDGs** N°**12** (responsible consumption & production), **13** (climate action), **15** (life on land)
WP3 participatory developed scenarios of sustainable intensification of parklands (**ISMSI**) co-designed and implemented by farmers, policy makers, governors, local authorities, scientists, NGOs, technical agencies to sustain food and income security	# of co-designed alternative scenarios for managing sustainable intensification (**ISMSI**), based on multifunctional management and environmental, economic and social solutions. # of revised landscape governance arrangements	**Collaborative parklands intensification management** involving key stakeholders through **new institutional governance arrangements**	Increase in density and in diversity of multipurpose woody cover in more sustainable parklands # of new policies on agroforestry intensification	**Poverty is significantly reduced amongst farmers in the selected project areas** (income increased over various years, women have access to land, stable new governance arrangements for landscape management with resilient farming systems) From local to national: Contribution to achieving **SDGs** N°**1** (no poverty), **5** (gender equality)
		Contribute to food and income security	# of people involved in parkland products value chains ; # of new or increased value chains of sustainable homegarden/parklands products, Increase in income from value chain participation	
WP4 Design and facilitation of ISMSI scaling, impact pathways of the project outputs	# of innovate scenarios/**ISMSI** models tested, validated and agreed upon by key landscape actors			**Migration trends are slowed down** (from rural to urban, from region to other regions, more stable men/women ratio in rural areas) From local to Sub regional: Contribution to achieving **SDG** N° **8** (decent work & economic growth)

ANNEX 4 ASSOCIATED PARTNERS COMMITMENT LETTERS

- NGO ASSOCIATION POUR LA PROMOTION DES ARBRES FERTILITAIRES, DE L'AGROFORESTERIE ET LA FORESTERIE INTERNATIONALE (APAF)

- Global Shea Alliance (GSA)

- NGO BIRDLIFE international

« attestation d'engagement »

L'APAF s'engage à participer aux réunions, du kikoff à Ouagadougou, du midterm à Dakar, de fin de projet à Montpellier.

L'apport en nature pour la participation des représentants de l'APAF au projet est évaluable à deux mois de salaires, soit 6000 euros.

L'APAF travaillera sur la définition des indicateurs et l'approche participative des WP 3 et 4.
Elle participera à la mise en place du suivi des indicateurs après projet.

le 01.12.2017
APAF
Arbousses Bas
48110 Moissac-V.F.
Tél. 04 66 63 04 46

le président: Pascal Humbert

Accra, November 24, 2017

I the undersigned, Marie Veyrier, Development Director for the Global Shea Alliance, hereby confirm that the Global Shea Alliance (GSA) is an Associate Partner to the project "Roles of Agroforestry in sustainable intensification of small farMs and food SEcurity for of SocIetIes in West Africa (RAMSESII)." The GSA will collaborate with the Research and Development Institute (IRD) and all the Consortium Partner on the to achieve the goals of the project, namely providing Innovative Scenarios for Managing Sustainable Intensification (ISMSI) of agroforestry parklands, co-built with stakeholders on two scales, farm and parkland, to maximize and sustain their adoption. By combining ISMSI at these two scales, RAMSESII expects to promote successful, replicable, innovative agroforestry intensification practices. The proposed project is aligned with the GSA sustainability program, which aims at empowering women and protecting the ecosystems in the shea parklands. It will inform GSA strategy in terms of parkland management trainings and tree planting.

As the non-profit industry association for shea, the GSA represents all industry stakeholders, including women collectors, private companies, NGOs, and research institutions. The GSA will contribute to the following activities: i) diffusion of the project outputs to different groups of stakeholders ii) widespread upscaling dissemination of the project outputs. The GSA will participate to the planning and closing project meetings (either in-person or remotely). Dissemination will take place through presentation and discussion at the GSA International Conference which takes place annually in West Africa, and at two country-level workshops, as well as through online channels. For these activities, the estimated contribution of GSA to the project is of EUR 5,000, which represents 20-men day throughout the project.

Yours sincerely,

Marie Veyrier

Development Director, Global Shea Alliance

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Vogelbescherming
NEDERLAND

Dr. Josiane Seghieri
RAMSESII Leap Agri project leader
Université de Montpellier
CC0057, 163 rue Auguste Broussonet
34090 Montpellier - FRANCE

Datum	: 04 December 2017
Ons kenmerk	: 17 B405
Projectnummer	: P00551
Doorkiesnummer	: 030 693 7758 (Jaime García Moreno M.)
Betreft	: letter of commitment RAMSESII Leap-Agri

Dear Dr. Seghieri,

This is to express BirdLife's commitment to take part in the RAMSESII Leap-Agri project.

BirdLife will participate in the three key meetings of the project: kick-off in Ouagadougou, mid-term in Dakar, and end of project in Montpellier.

BirdLife will play a role in the work packages 3 and 4, which relate to the definition and implementation of indicators, and the dissemination of outputs of the project. We will contribute to the project in kind, dedicating 2 months of staff time to it. This is equivalent to about €8000.

Robert Kwak
Head of Conservation Department