

## STRADIV - System approach for the TRAnsition to bio-DIVersified agroecosystems. Data Management Plan

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# STRADIV—System approach for the TRAnsition to bio-DIVersified agroecosystems"

Agropolis Fondation 1504-003

Data Management Plan V 1.5 - maj 06/05/2020

## Glossary, list of acronyms

ACRONYME	DEFINITION
CIRAD	Centre de coopération internationale en recherche agronomique pour le développement
WP	Work package
Aïda	Agroecology and sustainable intensification of annual crops
GECO	Banana, Plantain and Pineapple Cropping Systems
AMAP	Botany and Modelling of Plant Architecture and vegetation
ARTDEV	Stakeholders, resources and territories in development
CBGP	Centre for Biology and Management of Populations
SELMET	Mediterranean and Tropical Livestock Systems
GREEN	Management of renewable resources and the environment
HORTSYS	Agroecological Functioning and Performances of Horticultural Systems
TETIS	Territoris, Environnment, Remote sensing and spatial information
SYSTEM	Functioning and management of tropical and Mediterranean cropping systems
PSH	Plant and Garden Cropping Systems
CEFE	French research center in Ecology
CGIAR	Consultative Group on International Agricultural Research
ICRAF	World Agroforestry Center
CIAT	International Center for Tropical Agriculture
CIRDES	International Center for Research and Development on Wetland Livestock
WUR	Wageningen University & Research
CATIE	Tropical Agronomic Center for Research and Teaching
UFRA	Federal Rural University of Amazonia

## Project information

Project acronym	STRADIV
Project full title	System approach for the TRAnsition to bio-DIVersified agroecosystems, from process analysis to multi-scale co-conception with actors.
Name of the funder(s)	Agropolis Fondation
Call Identifier	Flagship project
Topic of the call	Agro-ecosystem management
Grant agreement number	1504-003
Project duration	36 months 2016-01-01/2018-12-31
Project coordinator	CIRAD, research unities Aïda and GECO
Project scientific leader at Cirad	eric.scopel@cirad.fr;philippe.tixier@cirad.fr
Project goals	Our main objective is to define the conditions needed for the ecological transition of agroecosystems based on their biodiversification and their compatibility To a multi scale innovation dynamics built by and with local actors. In the context of small tropical farms, the application of these conditions requires to be unraveled (i) by developing and integrating scientific knowledge on the processes associated with plant diversity and its management and (ii) by designing a dialogue framework to enable farmers and other local stakeholder to strengthen the biodiversification of their agroecosystems by a co-conception approach. The STRADIV project will provide answers to the main bottlenecks preventing a successful ecological transition of agroecosystems. These issues, at the interface of disciplines and scales, are related as well to the management of plant diversity, the integration of biophysical and ecological processes in systems that optimize ecosystem services, as the formalization of a multi-scale and multi-actor dialogue inside functional platforms allowing the enhancement of the negotiation with and between farmers.
Key words	Agroeocology; Biodiversity; Transition; Agroforestery; pest and disease; Ecosystem services; Efficiency;trade-offs and synergies;modelling; multistakeholders platforms
Project partners	CIRAD: UR AÏDA and UR GECO, UMR AMAP, UMR ARTDEV, UR BIOAGRESSEURS, UMR CBGP, UMR ECO&SOL, UR GREEN, UR HORTSYS, UMR INNOVATION, UMR SELMET, UMR SYSTEM, UMR TETIS INRA: PSH CNRS: CEFE International Center of the CGIAR:ICRAF (Cameroon, Central America) and AfricaRice (Madagascar), CIAT (Central America) International research center: CATIE (Central America), CIRDES (Burkina Faso), WUR (Master and PhD students) National research center: UFRA (universidade federal rural da Amazônia), Brazil

## List of the datasets produced by the project

Dataset reference number	Pays	Dataset name	Description	Forma t	Data storage and access	Dataset leader	Related WP(s)
M1	Madagascar	Stradiv 1 Experimental Design	Data collected on the STRADIV 1 experimental design (96 * 9 * 5.1) diversified rotation and effect on performance of cropping systems in the Vak in Ivory. Agronomic data, plot itk, plant material, test plan, early soil analysis, manure data, weed biomass data, flowering rice LAI, soil faunas (monoliths, pit fall trap), SPAD data (Rice, peanut, sorghum), yield component rice, biomass (rice, groundnut, sorghum, mucuna, nut, C. spectabilis, cowpea) At present data for 2015-2016. Data sets related to WP2 and WP3.	Excel	Database PostGreSQL, Access on request restricted to project partners	Aude Ripoche, CIRAD	WP 2, WP 3
M2	Madagascar	Stradiv 2 Experimental Design	Data collected on the STRADIV 2 device (60 * 9 * 15m) in the Vak in Ivory. + 17 farmers plots agronomic data, Plot itk, plant material, test plan, manure data, weed biomass data, soil faunas (monoliths, pit fall trap), data on white grubs (species, estimated yield (Rice, groundnut, sorghum), yield component in rice, biomass (rice, pen) Weed surveys ° + recoveries For now data 2015-2016.	Excel	Database PostGreSQL, Access on request restricted on project partners	Aude Ripoche, CIRAD	WP 2, WP 3
M3	Madagascar	Monitoring of reference farms MO 2015-2019	20 farms: multi-year structure, , resource map flows, livestock feedings, incomes and labor time for rainfed and lowland crops, local practices and innovations performance	Micros oft Access and Excel, QGIS	Access on request restricted on DP SPAD	Patrice Autfray, Jean- François Bélières, CIRAD	WP4
M4	Madagascar	Investigation diagnosis of farms MO 2014-2015	240 farms : Structure, practices including biodiversity, performance (income)	Micros oft Access and export	Access request restricted on DP SPAD	Jean- François Belleres, CIRAD	WP1, WP4

				files for proces sing (SPSS XLSTAT			
M5	Madagascar	Stradiv 4 Prototyping cropping systems 2017-2019	Data collected on the STRADIV 4 device, 2 fields (rice and rotation) * 144 * 39m <sup>-2</sup> ) in the Vak in Ivory. + 20 farmers involved in assessment, multicriteria agronomic data, including weed biomass, striga counting, white grubs counting, yields of rice and maize, cassava, groundnut, bambara nut, cowpea, soybean), yield component in rice, crop and legume cover crop biomass, farmers scoring data assessment	Excel	Database PostGreSQL, Access on request restricted on project partners	Patrice Autfray, CIRAD	WP4
BF1	Burkina Faso	Survey of dairy farms	20 farms	Excel	Access on request restricted on project partners	Ollo Sib (PHD)	WP4
BF2	Burkina Faso	Monthly monitoring of dairy cows' workshops	Monthly monitoring of 15 farms: zootechnic data, milk production, cow weight measurements, what they eat, farrowing (18 months).	Excel	Access on request restricted on project partners	Ollo Sib (PHD)	WP4
BF3	Burkina Faso	Agronomic monitoring of fodder banks	Agronomic monitoring of fodder banks: data on growth measurements of perennial plants (height, diameter, number of leaves of shrubs), monitoring on the production of leaves with cuts, soil analysis.	Excel	Access on request restricted on project partners	Ollo Sib (PHD)	WP4
BF4	Burkina Faso	Agronomic monitoring of fodder plots	Agronomic monitoring of fodder plots (itk, yields, environment) : corn associated with service plants	Excel	Access on request restricted on project partners	Patrice Kouakou, CIRAD	WP4
BF5	Burkina Faso	Analysis of the network of local stakeholders involved in fodder crops	Analysis of the networks of stakeholders involved in fodder production	Excel	Access on request restricted on project partners	Der Dabiré, Cirdes	WP1
A1	Martinique	Effect of tomato- related cover on	Experimental results on Tomato associated with service plants: abundance of pests and auxiliaries, yield	Excel	Access on request restricted on PO	Béatrice Rhino,	WP2

		the production and			Martinique	CIRAD	
		presence of whiteflies					
CR1	Costa rica	Sarah Capeli	Evaluation of cover crops 20 farms: topoclimatic conditions, coffee plant physiology and yield (age, destitutes, size, practices), characteristics of cover plants: litter, % soil cover. Species "native" or selected by producers. Botanical description of native species. Inputs (pesticides), practices (method of weed control, number of passages), working time, and cost of production. Area of Turialba. Over 6 months, 1 pass per farm.  Measurement of light transmissive to the ground (densiometer).	Excel	Access on request restricted on project partners	Karel van den meersch e	WP 2
N1	Nicaragua	Ecosystem services and coffee production la Dalia	Measurement in 2 steps. SE produced in plots of coffee. First survey of one hundred plots: soil analysis, tree inventory (number, size, species), aerial tree biomass, coffee yield surveys, water quality indicator according to the number of phyto treatments. To explain the factors of variation in services. Then more detailed follow-up surveys on 27 very different plots in terms of agricultural production and services: what are the determinants of service provision? Over 1 year, the Dalia.	Excel	Access on request restricted on project partners	Martin Notaro (thésard)	WP 4
N2	Nicaragua	Network of 60 plots on 3 farms, Camille protocol	Network of 60 plots on 3 farms, management intensity gradient: Conventional -organic. Management at the farm level (technical itinerary, plot management). 3 species of trees of common shade. 5 repetitions. The type of shade on each holding + other species which vary according to the holdings. Structure and composition of shade species: Mapping of distribution of shade trees (distance, angles), height, diameter, basal area. Distribution of the canopy on the ground, name of the species present on the plots. Temperature and humidity in each parcel + weather station. 4 coffee plants identified (indicators of potential product and losses). Measure between the relationship between diversity	Excel	Access on request restricted on project partners (WUR ?)	Clémenti ne Allinne	WP2

			and services: impact of diseases and pests. Measure 4 / year incidences and severities foliar diseases. Link with soil fertility (soil analysis on a subsample, ammonium nitrate mineralization), + bait lamina data. Stock measurements litter in relation to moisture. Services: carbon stock in aerial biomass, water ecosystem service, soil fertility, habitat (biodiversity index). Regulation of the bark beetle through predation by insects (ants) (to be done). Follow-up of production and diseases over 2 years, the remainder 1 year.				
N4	Nicaragua	Follow-up co- design UCA	Data on about 15 producers over 2 year, to evaluate the interaction between 2 shade levels and 3 fertilization treatments (simple, double and used of efficient microorganisms). Characterization of shade (percentage, species and number of trees by strate (10-4m;4-10m;<10m), impact on foliar pest and deases, production.  Economic analysis of each options to evaluate cost and benefits.  Biophysical and economic analysis made by a local technician. Research question and experimental design was establish with the producers. Analysis of data and identification of the more sustainable option performed during participative workshop.	Excel	Access on request restricted on project partners, UCA, CATIE, union of cooperatives.	Clémenti ne Allinne	WP 4
C1	Cameroun		Biophysical variables, harvested between 2015 and 2018, on 42 samples, 1 sample = a plot of 800 m2 cocoa agroforestry system, single catch data (1 data per plot per variable): biomasses of several compartments, diversity and species specific richness, Cocoa yields, measurements of functional features (tree leaves), cocoa architecture (typology), soil physico-chemical analysis (0.15 and 15-30 cm). Thèse A Nijmeijer (autre projet : SAFSE)	Excel	Open data	Stéphane Saj, CIRAD	WP2

## M1, M2 Madagascar - Agronomical Experimental datasets produced

#### Dataset(s) description

	LAI : leaf area index
	SPAD : instrument d'analyse de la teneur en chlorophylle
	rendement de cultures (riz, arachide et sorgho) : composante de rendement
Dataset description	et Biomasse
	Biomasses d'adventices
	Biomasses de plantes de service : Mucuna, C. spectabilis, niébé
	Nombre et espèces d'individus de la faune du sol
Nature of the dataset	Experimental or observational data.
Method of production	Experimental agronomic design
Tools for data processing	Work on Excel file (Aude Ripoche)
Tools for data processing	Backup under a PostgreSQL database (Sandrine Auzoux)
Estimated volume of data	<100Mo
Existing publications related to	No publication at the moment
this dataset	No publication at the moment
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare
Intended future uses	data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	Crop ontology, Darwin core, EML	
Data format	Format Excel, jpg, txt	
File management	No naming standard or classification. File management is unique to each researcher	

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Leader: Aude Ripoche, UR Aïda/CIRAD other contributors: Richard Randriamantsoa, Rasambatra Elias Romélio, Patrice Autfray, Eric blanchart, jean trap, Djibril Djigal
Person in charge of the data analysis	Aude Ripoche, CIRAD
Intellectual property rights	Governed by the FOFIFA-CIRAD convention.
Aspects éthiques	No personal data Collected data on IVORY experimental design site and in networks farms in partnership with Madagascar

#### Data sharing, diffusion and reuse

During the project	Data sharing on request with project partners
After the project	So far, data sharing hasn't been scheduled
Type of license	So far, no license defined
Data repository	Dataverse CIRAD
Data identifier	DOI CIRAD
Dissemination date	Pas de mise à disposition pour l'instant
Data reading	Words, Excel, Paint, PostgreSQL
Sensitive data	No sensitive Data.

#### Archiving and preservation (including storage and backup)

Storage and backup during the project	The datasets are saved on an internal CIRAD server (managed by Sandrine Auzoux), and the data leader keep the original datasets on their laptop
preservation, localisation	So far, data preservation hasn't been scheduled
Recommended lifetime	
Final volume of archived data	<100Mo
Data to be destroyed	No data to destroy
Name of person in charge of archiving and preservation	None
Associated costs	None

#### DMP for dataset(s)

## **M3 Madagascar - Monitoring of reference farms MO 2015-2018**

#### Dataset(s) description

Dataset description	20 farms : Structure, performance practices, farm and plot levels, pluri-
•	annual recording
Nature of the dataset	observation and survey dataset
Method of production	survey protocol
Tools for data processing	Microsoft Access and export files for processing (SPSS XLSTAT)
Estimated volume of data	<100Mo
	Naudin K., Autfray P., Dusserre J., Penot E., Raboin L.M., Raharison T.,
	Rakotoarisoa J., Ramanantsoanirina A., Randrianjafizanaka M.T, Rasolofo L.I.,
Frieties with lieutiese veleted to	Raveloson N., Razafimahatratra M., Salgado P., Sester P., Vom Brocke K.,
Existing publications related to	Scopel E., 2018. L'agro-écologie à Madagascar : de la plante au paysage.
this dataset	Dans: Côte FX., Poirier-Magona E., Perret S., Rapidel B., Roudier P., Thirion
	MC. (eds), La Transition agro-écologique des agricultures du Sud,
	Agricultures et défis du monde, AFD, Cirad, Éditions Quæ, Versailles.
Do was of avisting data	Access request restricted on DP SPAD
Re-use of existing data	
Intended future uses	Possibility of reuse by researchers for closed research questions to compare
Intended future uses	data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	DDI
Data format	Format Excel, jpg, txt
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Patrice Autfray, CIRAD Hery Zo Rakotofiringa, FOFIFA
Person in charge of the data analysis	Patrice Autfray, Jean-François Bélières CIRAD, Hery Zo Rakotofiringa, FOFIFA
Intellectual property rights	Accord Fofifa Cirad
Ethical aspects	No specific protocol to manage personal data

#### Data sharing, diffusion and reuse

During the project	Access on request restricted on DP SPAD	
After the project	Access on request	
Type of license	No licence	
Data repository	Dataverse Cirad (in the near future)	
Data identifier	DOI Cirad	
Dissemination date	None	
Data reading	Excel	
Sensitive data	personal data about farmers	

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse Cirad (in the near future)
Recommended lifetime	10 ans
Final volume of archived data	< 100 Mo
Data to be destroyed	No
Name of person in charge of archiving and preservation	Dataverse administrator

## M4 Madagascar - Investigation diagnosis of farms MO 2014-2015

#### Dataset(s) description

Dataset description	Survey dataset 240 farms representatives of all farms of 8 fokontany in 4 communes (zones intervention BVPI SE/HP project), which is 4 379 farms: structure (land, livestock, people, agricultural equipment, other equipment, buildings, etc.), practices and performances on all parcels (2 158 parcels), products and expenses, gross margin and net margin for all activities (including livestock farming, activities off farm),, agrobiodiversity for crops and livestock,
	performance (incomes) far all activities (one year : 2014/15)
Nature of the dataset	Survey dataset (2 visits to households)
Method of production	Survey protocol (2 visits to households)
Tools for data processing	Microsoft Access and export files for processing (SPSS XLSTAT)
Estimated volume of data	<100Mo
Existing publications related to this dataset	Razafimahatratra H. M., 2018. Agriculture de conservation et moyens d'existence des exploitations agricoles. Cas du Moyen Ouest de Madagascar. SupAgro Montpellier, ED Économie et Gestion de Montpellier.
	Raharison T., Bélières JF., Salgado P., Autfray P., Razafimahatratra H. M. et Rakotofiringa H. Z., 2017. Agro-biodiversité dans les exploitations agricoles familiales du Moyen Ouest de Vakinankaratra : des paysans en avance sur la recherche et le développement agricole durable ? Forum de la recherche sur la biodiversité et le développement durable – Fianarantsoa/Madagascar, 29-30 Novembre 2017. 14p.
	Razafimahatratra H. M., Raharison T., Bélières JF., Autfray P., Salgado P. et Rakotofiringa H. Z., 2017. Systèmes de production, pratiques, performances et moyens d'existence des exploitations agricoles du Moyen-Ouest du Vakinankaratra. SPAD CIRAD/FOFIFA/GSDM. Antsirabe (Madagascar) 103 p. <a href="http://agritrop.cirad.fr/586881/">http://agritrop.cirad.fr/586881/</a>
	Sourisseau JM., Bélières JF., Marzin J., Salgado P. et Maraux F., 2018. Les moteurs du développement de l'agro-écologie en Afrique subsaharienne : illustration sur les Hautes Terres malgaches. In La transition agro-écologique des agricultures du Sud. Côte, FX., Poirier-Magona, E., Perret, S., Roudier, P., Rapidel, B. et Thirion, MC. Ed., Versailles, AFD, Cirad, Éditions Quæ, pp. 183-202.
	Razafimahatratra Hanitriniaina Mamy, Bignebat Céline, Bélières Jean-François, David-Benz Hélène, Penot Eric. 2017.Livelihood assets as determinants of adoption and disadoption of conservation agriculture in Western Madagascar. 1 poster EAAE Congress - Towards Sustainable Agri-food Systems: Balancing Between Markets and Society. 15, Parme, Italie, 29 Août 2017/1 Septembre 2017
Re-use of existing data	Access request restricted on DP SPAD but wider use possible
Intended future uses	Possibility of reuse by researchers for closed research questions to compare
	data and results  Possible use by development to analyse the evolution of the farming system.
Users of data	Scientific community. But also rural development expert

#### Standards and metadata

Metadata standards	DDI
Data format	Format ACCESS, SPSS, Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Jean-François Bélières, CIRAD Tahina Raharison (GSDM/SupAgro), Hanitriniaina Mamy Razafimahatratra (FOFIFA),
Person in charge of the data analysis	Jean-François Bélières, CIRAD Tahina Raharison (GSDM/SupAgro), Hanitriniaina Mamy Razafimahatratra (FOFIFA),
Intellectual property rights	Accord Fofifa Cirad
Aspects éthiques	No specific protocol to manage personal data

#### Data sharing, diffusion and reuse

During the project	Access on request restricted on DP SPAD	
After the project	Access on request	
Type of license	No licence	
Data repository	Dataverse Cirad (in the near future)	
Data identifier	DOI Cirad	
Dissemination date	None	
Data reading	Excel	
Sensitive data	personal data about farmers	

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse Cirad (in the near future)
Recommended lifetime	10 ans
Final volume of archived data	< 100 Mo
Data to be destroyed	No
Name of person in charge of archiving and preservation	Dataverse Administrator ?

## M5 Madagascar - Stradiv 4 Prototyping cropping systems 2017-2019 produced

#### Dataset(s) description

Dataset description	Multicriteria agronomic data, flowering date, chlorophyll content indicator, weed biomass, striga and white grubs counting, yields of rice and maize, cassava, groundnut, bambara nut, cowpea, soybean, yield component in rice, crop and legume cover crop biomass C and N inputs Farmers scoring data assessment
Nature of the dataset	Experimental or observational data.
Method of production	Experimental agronomic design
Tools for data processing	Work on Excel file (Patrice Autfray)
	Backup under a PostgreSQL database (Sandrine Auzoux)
Estimated volume of data	<100Mo
Existing publications related to this dataset	No publication at the moment
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	Crop ontology, Darwin core, EML	
Data format	Format Excel, jpg, txt	
File management	No naming standard or classification. File management is unique to each researcher	

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Leader : Patrice Autfray, CIRAD other contributors : Richard Randriamantsoa, FOFIFA
Person in charge of the data analysis	Patrice Autfray, Philippe Letourmy CIRAD
Intellectual property rights	Governed by the FOFIFA-CIRAD convention.
Aspects éthiques	No personal data Collected data on IVORY experimental design site and in networks farms in partnership with Madagascar

#### Data sharing, diffusion and reuse

During the project	Data sharing on request with project partners
After the project	So far, data sharing hasn't been scheduled
Type of license	So far, no license defined
Data repository	Dataverse CIRAD
Data identifier	DOI CIRAD
Dissemination date	Pas de mise à disposition pour l'instant
Data reading	Words, Excel, Paint, PostgreSQL
Sensitive data	No sensitive Data.

Storage and backup during the project	The datasets are saved on an internal CIRAD server (managed by Sandrine Auzoux), and the data leader keep the original datasets on their laptop
preservation, localisation	So far, data preservation hasn't been scheduled
Recommended lifetime	
Final volume of archived data	<100Mo
Data to be destroyed	No data to destroy
Name of person in charge of archiving and preservation	None
Associated costs	None

## BF 1 Burkina Faso - Survey of dairy farms

#### Dataset(s) description

Dataset description	Survey of dairy farms 20 farms in 2015 in Koumbia , Nasso, Bobo-Dioulasso
Nature of the dataset	Survey
Method of production	Questioning from Ollo Sib to farmers
Tools for data processing	Excell
Estimated volume of data	245 KO
Existing publications related to this dataset	Sib O, Bougouma-Yameogo V M C, Blanchard M., Garcia E., Vall E., 2017, Production laitière à l'Ouest du Burkina faso dans un contexte d'émergence de laiteries diversifié des pratiques d'élevage et propositions d'amélioration. Rev. Elev. Med. Vet. Pays Trop., 70 (3):81-91, doi:10,19182/remvt,3152
Re-use of existing data	No
Intended future uses	No
Users of data	Ollo Sib (PHD) Eric Vall

#### Standards and metadata

Metadata standards	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Ollo Sib
Person in charge of the data analysis	Ollo Sib, Eric Vall
Intellectual property rights	Governed by the CIRDES-CIRAD convention. A vérifier ?
Aspects éthiques	Personal data about farmers No specific accord

#### Data sharing, diffusion and reuse

During the project	Acess limited to Burkina Faso team
After the project	Open acess
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Not yet (feb. 2019)
Data identifier	Not yet (feb. 2019)
Dissemination date	Not yet (feb. 2019)
Data reading	Excel
Sensitive data	Personal data about farmers

#### Archiving and preservation (including storage and backup)

Storage and backup during the project	Personal computer Ollo Sib, Eric Vall
preservation, localisation	No specific disposition
Recommended lifetime	-
Final volume of archived data	<100 MO
Data to be destroyed	No
Name of person in charge of archiving and preservation	Ollo Sib

#### DMP for dataset(s)

## BF 2 Burkina Faso - Monthly monitoring of dairy cows' workshops

#### Dataset(s) description

Dataset description	Monthly monitoring of 15 farms: zootechnic data, milk production, cow weight measurements, what they eat, farrowing (18 months). In 2015-2017 Koumbia, Nasso, bobo Diolasso
Nature of the dataset	Animal production data
Method of production	Monitoring by survey and measurement, monitoring by farmer
Tools for data processing	Excell
Estimated volume of data	<100MO
Existing publications related to this dataset	Not yet
Re-use of existing data	No
Intended future uses	Yes , scientific paper
Users of data	Ollo sib Eric Vall

#### Standards and metadata

Metadata standards	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Ollo Sib
Person in charge of the data analysis	Ollo Sib, Eric Vall
Intellectual property rights	Governed by the CIRDES-CIRAD convention.
Aspects éthiques	No sensitive data

#### Data sharing, diffusion and reuse

During the project	Acess limited to Burkina Faso team
After the project	Acess limited to Burkina Faso team
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Not yet (feb. 2019)
Data identifier	Not yet (feb. 2019)
Dissemination date	Not yet (feb. 2019)
Data reading	Excel
Sensitive data	No

Storage and backup during the	Personal computer
project	Ollo Sib, Eric Vall
preservation, localisation	No specific disposition
Recommended lifetime	-
Final volume of archived data	<100 MO
Data to be destroyed	No
Name of person in charge of	Ollo sib
archiving and preservation	Olio Sib

## BF 3 Burkina Faso - Agronomic monitoring of fodder banks

#### Dataset(s) description

Dataset description	Agronomic monitoring of fodder banks: data on growth measurements of perennial plants (height, diameter, number of leaves of shrubs), monitoring on the production of leaves with cuts, soil analysis.
Nature of the dataset	Agronomic data
Method of production	Field measurement, lab analysis
Tools for data processing	Excell
Estimated volume of data	<100MO
Existing publications related to this dataset	Not yet
Re-use of existing data	No
Intended future uses	Scientific paper
Users of data	Ollo sib Eric Vall

#### Standards and metadata

Metadata standards	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Ollo Sib
Person in charge of the data analysis	Ollo Sib, Eric Vall
Intellectual property rights	Governed by the CIRDES-CIRAD convention.
Aspects éthiques	No sensitive data

#### Data sharing, diffusion and reuse

During the project	Access limited to Burkina Faso team
After the project	Access limited to Burkina Faso team until publication of a paper (free acess after)
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Not yet (feb. 2019)
Data identifier	Not yet (feb. 2019)
Dissemination date	Not yet (feb. 2019)
Data reading	Excel
Sensitive data	No

#### Archiving and preservation (including storage and backup)

Storage and backup during the project	Personal computer Ollo Sib, Eric Vall
preservation, localisation	No specific disposition
Recommended lifetime	-
Final volume of archived data	<100 MO
Data to be destroyed	No
Name of person in charge of archiving and preservation	Ollo sib

## BF 4 Burkina Faso - Agronomic monitoring of fodder plots

#### Dataset(s) description

Dataset description	Agronomic monitoring of fodder plots (itk, yields, environment): corn associated with cover crop. 2016, Koumbia, Nasso, Bobo 13 fields 2017, Koumbia, Nasso, Bana, Sourkoudinga, Bobo, 25 fields
Nature of the dataset	Agronomic data
Method of production	Field measurement, lab analysis
Tools for data processing	Excell
Estimated volume of data	<100MO
Existing publications related to this dataset	Not yet
Re-use of existing data	No
Intended future uses	Scientific paper
Users of data	Ollo sib Eric Vall Patrice Kouakou

#### Standards and metadata

Metadata standards	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Ollo Si, Patrice Kouakou
Person in charge of the data analysis	Ollo Sib, Eric Vall, Patrice Kouakou
Intellectual property rights	Governed by the CIRDES-CIRAD convention.
Aspects éthiques	No sensitive data

#### Data sharing, diffusion and reuse

During the project	Access limited to Burkina Faso team
After the project	Access limited to Burkina Faso teamuntil publication of a paper (free access after)
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Not yet (feb. 2019)
Data identifier	Not yet (feb. 2019)
Dissemination date	Not yet (feb. 2019)
Data reading	Excel
Sensitive data	No

#### Archiving and preservation (including storage and backup)

Storage and backup during the project	Personal computer Ollo Sib, Eric Val, Patrice Kouakou
preservation, localisation	No specific disposition
Recommended lifetime	-
Final volume of archived data	<100 MO
Data to be destroyed	No
Name of person in charge of archiving and preservation	Ollo Sib, Patrice Kouakou

DMP for dataset(s)

## BF 5 Burkina Faso - Analysis of the network of local stakeholders involved in fodder crops

#### Dataset(s) description

Dataset description	Analysis of the networks of stakeholders involved in fodder production
Nature of the dataset	Sociological data
Method of production	Survey
Tools for data processing	Word
Estimated volume of data	<100MO
Existing publications related to this dataset	No
Re-use of existing data	No
Intended future uses	No
Users of data	Ollo sib Eric Vall

#### Standards and metadata

Metadata description	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Ollo Si, Der Dabiré
Person in charge of the data analysis	Ollo Sib, Eric Vall, Der Dabiré
Intellectual property rights	Governed by the CIRDES-CIRAD convention.
Aspects éthiques	No sensitive data

#### Data sharing, diffusion and reuse

During the project	Acess limited to Burkina Faso team
After the project	Acess limited to Burkina Faso team until publication of a paper (free acess after)
Type of license	
Data repository	Not yet (feb. 2019)
Data identifier	Not yet (feb. 2019)
Dissemination date	Not yet (feb. 2019)
Data reading	Excel
Sensitive data	No

Storage and backup during the	Personal computer
project	Ollo Sib, Eric Vall
preservation, localisation	No specific disposition
Recommended lifetime	-
Final volume of archived data	<100 MO
Data to be destroyed	No
Name of person in charge of archiving and preservation	Ollo Sib, Eric Vall

## A1 Antilles - Effect of tomato-related cover on the production and presence of whiteflies

#### Dataset(s) description

Dataset description	Experimental results on Tomato associated with service plants: abundance of pests and auxiliaries, yield Martinique
Nature of the dataset	Agronomic data
Method of production	Field measurements and observations
Tools for data processing	Excel
Estimated volume of data	<100 Mo
Existing publications related to this dataset	Sauvadet Marie, Rhino Béatrice, Loisel Corentin, Floch Laura, Deberdt Peninna, Becquer Thierry, Tixier Philippe, Harmand Jean-Michel. 2018.  Impacts of inter-row grass cover on soil biological fertility in tomato crop in Martinique. PoS2-52. In: Book of abstracts of the XV European Society for Agronomy Congress: "Innovative cropping and farming systems for high quality food production systems". Agroscope. Genève: Agroscope, Résumé, 149. European Society for Agronomy Congress (ESA 2018). 15, Genève, Suisse, 27 Août 2018/31 Août 2018.
Re-use of existing data	No
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Béatrice Rhino

#### Standards and metadata

Metadata description	No
Data format	Excel
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Béatrice Rhino
Person in charge of the data analysis	Béatrice Rhino
Intellectual property rights	Cirad
Aspects éthiques	None

#### Data sharing, diffusion and reuse

During the project	Shared with project partners
After the project	Dataverse CIRAD
Type of license	CC BY-NC-ND 4.0
Data repository	Dataverse CIRAD

Data identifier	DOI Cirad
Dissemination date	Not yet
Data reading	Excel
Sensitive data	No?

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse Cirad
Recommended lifetime	10 ans
Final volume of archived data	<100MO
Data to be destroyed	no
Name of person in charge of archiving and preservation	Béatrice Rhino

## CR1 Costa Rica Evaluation of cover plant – Costa Rica

#### Dataset(s) description

Dataset description	Evaluation of cover crops 20 farms: topoclimatic conditions, coffee plant physiology and yield (age, size, practices), characteristics of cover plants: litter, % soil cover. Species "native" or selected by producers. Botanical description of native species. Inputs (pesticides), practices (method of weed control, number of passages), working time, and cost of production. Area of Turialba. Over 6 months, 1 pass per farm. Measurement of light transmission to the ground (densiometer).
Nature of the dataset	Agronomic data
Method of production	Farm survey , field observation
Tools for data processing	Excell ?
Estimated volume of data	<100MO
Existing publications related to this dataset	?
Re-use of existing data	?
Intended future uses	?
Users of data	Scientific community and public ?

#### Standards and metadata

Metadata description	No
Data format	Excell
File management	No naming standard or classification. File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Karel van den meersche
Person in charge of the data analysis	Karel van den meersche
Intellectual property rights	Governed by the CATIE-CIRAD convention
Aspects éthiques	Est-ce qu'il y a une référence à des accords particuliers du type accès aux connaissance autochtone, savoir traditionnel, biodiversité ?

#### Data sharing, diffusion and reuse

During the project	Access on request restricted on project parterns
After the project	Access on request restricted on project parterns
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Dataverse ?
Data identifier	DOI Cirad ?

Dissemination date	
Data reading	
Sensitive data	Yes/no ?

#### Archiving and preservation (including storage and backup)

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse ?
Recommended lifetime	10 ans
Final volume of archived data	<100MO ?
Data to be destroyed	no
Name of person in charge of archiving and preservation	Karel van den Meersch

### N1 Nicaragua Ecosystem services and coffee production la Dalia

#### Dataset(s) description

Dataset description	Measurement in 2 steps. SE produced in plots of coffee. First survey of one hundred plots: soil analysis, tree inventory (number, size, species), aerial tree biomass, coffee yield surveys, water quality indicator according to the number of phyto treatments. To explain the factors of variation in services. Then more detailed follow-up surveys on 27 very different plots in terms of agricultural production and services: what are the determinants of service provision? Over 1 year, the Dalia
Nature of the dataset	Fields measurements and observations
Method of production	Experimental agronomic design and landscape
Tools for data processing	Excel file
Estimated volume of data	<100Mo
Existing publications related to this dataset	No publication at the moment
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	Crop ontology, Darwin core, eml	
Data format	Excel, txt, jpg	
File management	File management is unique to each researcher	

#### Responsibilities, intellectual property rights

Martin Notaro
Martin Notaro
CIRAD

#### Data sharing, diffusion and reuse

During the project	Shared with project partners
After the project	Dataverse
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Dataverse
Data identifier	DOI Cirad
Dissemination date	
Data reading	
Sensitive data	

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse
Recommended lifetime	
Final volume of archived data	<100Mo
Data to be destroyed	no
Name of person in charge of archiving and preservation	Dataverse Administrator ?

## N2 Nicaragua Coffee: Network of 60 plots on 3 farms, management intensity gradient: Conventional -organic.

#### Dataset(s) description

_	
Dataset description	Management at the farm level (technical itinerary, plot management). 3 species of trees of common shade. 5 repetitions. The type of shade on each holding + other species which vary according to the holdings. Structure and composition of shade species: Mapping of distribution of shade trees (distance, angles), height, diameter, basal area. Distribution of the canopy on the ground, name of the species present on the plots. Temperature and humidity in each parcel + weather station. 4 coffee plants identified (indicators of potential product and losses). Measure between the relationship between diversity and services: impact of diseases and pests. Measure 4 / year incidences and severities foliar diseases. Link with soil fertility (soil analysis on a subsample, ammonium nitrate mineralization), + bait lamina data. Stock measurements litter in relation to moisture. Services: carbon stock in aerial biomass, water ecosystem service, soil fertility, habitat (biodiversity index). Regulation of the bark beetle through predation by insects (ants) (to be done). Follow-up of production and diseases over 2 years, the remainder 1 year.
Nature of the dataset	Fields measurements and observations
Method of production	Experimental agronomic design and landscape
Tools for data processing	Excel file
Estimated volume of data	<100Mo
Existing publications related to this dataset	No publication at the moment
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	Crop ontology, Darwin core, eml	
Data format	Excel, txt, jpg	
File management	File management is unique to each researcher	

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Clémentine Alinne
Person in charge of the data analysis	Clémentine Alinne
Intellectual property rights	CIRAD
Aspects éthiques	

#### Data sharing, diffusion and reuse

During the project	Shared with project partners
After the project	Dataverse
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Dataverse
Data identifier	DOI Cirad
Dissemination date	
Data reading	
Sensitive data	

Storage and backup during the project	Personal computer
preservation, localisation	Dataverse
Recommended lifetime	
Final volume of archived data	<100Mo
Data to be destroyed	no
Name of person in charge of archiving and preservation	Dataverse Administrator ?
archiving and preservation	

## N4 Nicaragua Follow-up co-design UCA

#### Dataset(s) description

Dataset description	Data on about 30 producers over 1 year, type characterization of shade: impact on aladies and pests, fertility and production. Observations (counts,) made by producers. Measures simpler than Camille proctocole. Soil analysis.
Nature of the dataset	Surveys and observations
Method of production	Surveys protocols
Tools for data processing	Excel
Estimated volume of data	<100Mo
Existing publications related to this dataset	No publication at the moment
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	DDI
Data format	Excel, txt
File management	File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Clémentine Alline
Person in charge of the data analysis	Clémentine Alline
Intellectual property rights	Accord Cirad - partenaire du Nicaragua ?
Aspects éthiques	Protocol to manage personal data (anonymization?)

#### Data sharing, diffusion and reuse

During the project	Shared with project partners
After the project	Dataverse
Type of license	https://creativecommons.org/choose/?lang=fr (aller choisir votre licence)
Data repository	Dataverse
Data identifier	DOI Cirad
Dissemination date	
Data reading	
Sensitive data	

Storage and backup during the	Personal computer
project	
preservation, localisation	Dataverse
Recommended lifetime	
Final volume of archived data	<100Mo
Data to be destroyed	no
Name of person in charge of	Dataverse Administrator ?
archiving and preservation	

### C1 Cameroon – Cocoa agroforestery systems chronosequences

#### Dataset(s) description

Dataset description	Biophysical variables, harvested between 2015 and 2018, on 42 samples, 1 sample = a plot of 800 m2 cocoa agroforestry system, single catch data (1 data per plot per variable): biomasses of several compartments, diversity and species specific richness, Cocoa yields, measurements of functional features (tree leaves), cocoa architecture (typology), soil physico-chemical analysis (0.15 and 15-30 cm). Thèse A Nijmeijer (autre projet: SAFSE)
Nature of the dataset	fields measurements and observations
Method of production	Experimental design
Tools for data processing	Excel
Estimated volume of data	<1G0
Existing publications related to this dataset	Nijmeijer, A., Lauri, PE, Harmand, JM, Saj, S., 2018. Carbon dynamics in cocoa agroforestery systems in Central Cameroon: afforestation of savannah as a sequestration opportunity. Agroforestery Systems. Online Nijmeijer, A., Lauri, PE,, Harmand, JM,, Freschet, GT., Essobo-Nieboukaho, JD., Fogang, PK., Enock, S., Saj, S., 2019Long-term dynamics of cocoa agroforestery systems established on lands previously occupied by savannah or forests. Agriculture, Ecosystems & Environment 275, 100-111
Re-use of existing data	No existing data reused
Intended future uses	Possibility of reuse by researchers for closed research questions to compare data and results
Users of data	Scientific community

#### Standards and metadata

Metadata standards	Darwin core, eml
Data format	Excel, txt
File management	File management is unique to each researcher

#### Responsibilities, intellectual property rights

Person in charge of the data collection	Stéphane Saj
Person in charge of the data analysis	Stéphane Saj
Intellectual property rights	CIRAD
Aspects éthiques	The anonymity of the owners of the agroforestery systems studied must remain guaranteed.

#### Data sharing, diffusion and reuse

During the project	Shared with project partners
After the project	Dataverse

Type of license	
Data repository	Dataverse
Data identifier	DOI Cirad
Dissemination date	2029
Data reading	
Sensitive data	Not but the anonymity of the owners of the agroforestery systems studied must remain guaranteed.

Storage and backup during the	Personal computer
project	
preservation, localisation	Dataverse
Recommended lifetime	20 years
Final volume of archived data	<100Mo
Data to be destroyed	no
Name of person in charge of	Benedicte Ohl, benedicte.ohl@inra.fr
archiving and preservation	

### External Data set description list

Please list and describe any existing datasets which will be used for the research to be carried out (third party data sources). Please also identify any specific issues relating to access to these data and how you will overcome any difficulties.

Dataset name	 istent ntifier	Dataset description	Source of data	Access issues
Exemples :				
NBN Gateway	:://doi. 10.100 1	Species and habitat data, including National Vegetation Classification, Phase 1 Habitat Classification	National Biodiversity Network	Full access allowed through www.searchnbn.n et
Land Cover Map 2000 (LCM2000)		Satellite derived remote-sensed datasets providing broad habitat definitions. GIS vector (polygon) dataset at 0.1m resolution.	Centre for Ecology & Hydrolog y	Forest Research have licence agreement
National Inventory of Woodland and Trees		Derived from LCS88 dataset plus updated to 1995 from Forestry Commission sources; provides info on broadleaved/conifer woodland > 2ha and small woods and trees (0.1-2ha)	Forestry Commission	Full access as part of Forestry Commission
Incidence of reported zoonotic disease		Actual cases of Lyme disease and unconfirmed cases; if possible to be used as patient sample	Health Protection Agency	Potential confidentiality issues

### DMP information

Label	Date	Author and affiliation	Comments
1ère version du PGD First DMP version	2017/07/10	Auzoux Sandrine, UR Aïda, CIRAD	Description générale des jeux de données produits
2ème version du PGD (1.5) 2 <sup>nd</sup> DMP version	06/05/20	Auzoux Sandrine, Naudin Krishna, UR Aïda, CIRAD With contributions from: Aude Ripoche, CIRAD Patrice Autfray, CIRAD Jean-François Bélières, CIRAD Patrice Autfray, CIRAD Ollo Sib, CIRDES Patrice Kouakou, CIRAD	PGD par jeux de données

	Der Dabiré, CIRDES	
	Béatrice Rhino, CIRAD	
	Karel van den meersche, CIRAD	
	Martin Notaro, Doctorant CIRAD	
	Clémentine Allinne, cIRAD	
	Stéphane Saj, CIRAD	
3ème		
3 <sup>rd</sup> ,		