



TRansition paths to sUustainable  
legume-based systems in EEurope

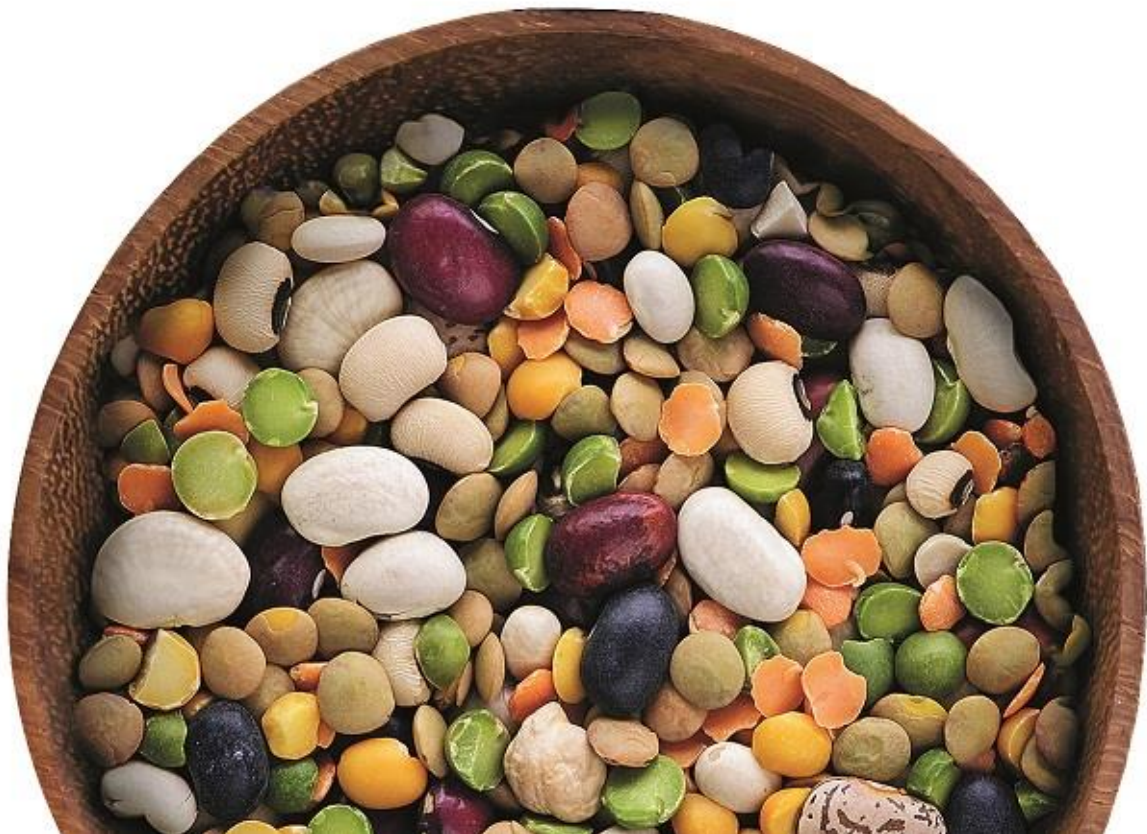
## TRUE Annual Activity Plan, Year 3

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Deliverable 9.5 (D53)

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Pietro Iannetta, TRUE Coordinator

April 26<sup>th</sup>, 2019





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## Deliverable Description & Contributors

- Due date: 30<sup>th</sup> April 2019
  - Actual submission date: 26<sup>th</sup> April 2019
  - Project start date: 1<sup>st</sup> April 2017
  - Duration: 48 months
  - Work package: Coordination (WP9)
  - Work package leader: Pietro P.M. Iannetta (JHI)
  - Deliverable Title: TRUE Annual Activity Plan – Year 3
  - Nature of deliverable: Report
  - Dissemination level: PU, Public
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- **Deliverable description:** This plan will formalise specific operations (meetings and agendas), at WP and sub-WP level for the following 12 months. The output will be formalised *via* the project workspace (SharePoint) and associated project management software. The plan will identify and facilitate the necessary co-ordination to help ensure the timely delivery and success of linked project activities and meetings or workshops. This plan will also help inform the framework of the DMP (D9.2).
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- **Contributors**
    - Fanny Tran, Pietro P.M. Iannetta (JHI)
    - Karen Hamann (IFAU)
    - Luiza Toma (SRUC)
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## 1. Year 3 Deliverables

**Table 1.** List of Deliverables scheduled to be submitted during Year 3 of the project.

No.	No. in Work Package	Title	Lead Beneficiary	Type	Dissemination Level	Original Estimated Delivery Date (project month)
D23	D4.1	Map of legume food supply chains and trade	IFAU	Report	Public	18*
D25	D4.3	Market demand of EU feed industry for grain legumes	IFAU	Report	Public	24*
D27	D4.5	Report: SDIs for quality chains	IFAU	Report	Public	24
D28	D4.6	Report: practices for commercialisation	IFAU	Report	Public	24*
D53	D9.5	Annual activity plan - Year III	JHI	Report	Public	25
D14	D2.4	Submit DMP, database populated - update for Year III	AUA	Report	Confidential	30
D42	D7.3	Delphi for favourable governance contexts	ESSRG	Report	Public	32
D6	D1.6	Scientific, practice and policy publications - Year III	UHOH	Report	Public	36
D30	D5.2	Summary leaflet of Attributional LCA	BU	Other	Public	36
D31	D5.3	LCA Database for Open Access	BU	Other	Public	36
D33	D5.5	European diets environmental impact & nutrition	TCD	Report	Confidential	36
D34	D5.6	Environment and nutri-economic assessments of European diets – Report I	TCD	Report	Public	36
D36	D6.1	Definition of Sustainability Indicators for WP8	SRUC	Report	Confidential	36



No.	No. in Work Package	Title	Lead Beneficiary	Type	Dissemination Level	Original Estimated Delivery Date (project month)
<b>D37</b>	D6.2	Behavioural analysis of farmers uptake and consumers choice	SRUC	Report	Public	36
<b>D38</b>	D6.3	Scenarios for upscaling production, including economic and trade indicators – Report I	SRUC	Report	Public	36
<b>D45</b>	D8.2	Decision support models: environment/economy/policy/legume systems	SRUC	Demonstrator	Confidential	36
<b>D56</b>	D9.8	Impact plan from Stakeholder Advisory Board	JHI	Report	Public	36

\* For new estimated delivery dates, see Table 2



**Table 2.** Deliverables Gantt chart where green bar endpoints denote the end of month deadline for submission of Deliverables.

Year	2019										2020		
	Month	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Project month	25	26	27	28	29	30	31	32	33	34	35	36	
<b>Deliverables</b>													
<b>D23:</b> Map of legume food supply chains and trade (IFAU)*	[Red bar from Apr. 25 to Apr. 26]												
<b>D25:</b> Market demand of EU feed industry for grain legumes	[Red bar from Apr. 25 to Jun. 27]												
<b>D27:</b> Report: SDIs for quality chains (IFAU)*	[Red bar from Apr. 25 to Sep. 30]												
<b>D28:</b> Report: practices for commercialisation (IFAU)*	[Red bar from Apr. 25 to Oct. 31]												
<b>D53:</b> Annual activity plan - Year III (JHI)	[Green bar from Apr. 25 to Apr. 26]												
<b>D14:</b> Submit DMP, database populated - update for Year III (AUA)	[Green bar from Apr. 25 to Oct. 31]												
<b>D42:</b> Delphi for favourable governance contexts (ESSRG)	[Green bar from Apr. 25 to Nov. 30]												
<b>D6:</b> Scientific, practice and policy publications - Year III (UHOH)	[Green bar from Apr. 25 to Mar. 31]												
<b>D30:</b> Summary leaflet of Attributional LCA (BU)	[Green bar from Apr. 25 to Mar. 31]												
<b>D31:</b> LCA Database for Open Access (BU)	[Green bar from Apr. 25 to Mar. 31]												
<b>D33:</b> European diets environmental impact & nutrition (TCD)	[Green bar from Apr. 25 to Mar. 31]												
<b>D34:</b> Environment and nutri-economic assessments of European diets – Report I (TCD)	[Green bar from Apr. 25 to Mar. 31]												
<b>D36:</b> Definition of Sustainability Indicators for WP8 (SRUC)	[Green bar from Apr. 25 to Mar. 31]												
<b>D37:</b> Behavioural analysis of farmers uptake and consumers choice (SRUC)	[Green bar from Apr. 25 to Mar. 31]												



Year	2019										2020		
Month	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
Project month	25	26	27	28	29	30	31	32	33	34	35	36	
<b>Deliverables</b>													
<b>D38:</b> Scenarios for upscaling production, including economic and trade indicators – Report I (SRUC)													
<b>D45:</b> Decision support models: environment/economy/policy/legume systems (SRUC)													
<b>D56:</b> Impact plan from Stakeholder Advisory Board (JHI)													

\* New estimated Delivery Dates described in the Grant Amendment (AMD-727973-75) launched April 2019.





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### **Map of Legume Food Supply Chains and Trade (D23/D4.1, IFAU)**

This Deliverable will report on the EU food market pull for legumes, including a map of the infrastructure for processing, trade and consumer preferences. Input data will include quality chain prices of products from farm to retail markets. This report will be made public through the TRUE website.

### **Market demand of EU feed industry for grain legumes (D25/D4.3, IFAU)**

A report on market demand of EU feed industry for grain legumes in feed for livestock and aquaculture. This task will focus on conventional and organic soy and lupins and will be rooted in practical and desk-based case studies. Delivery of the report will be linked to two key-stakeholder surveys, including those engaged in Regional Cluster workshops. The findings will be assessed with respect to trade agreements, tariffs and quality standards of the feed market. This report will be made public through the TRUE website.

### **Reports on SDIs for Quality Chains (D27/D4.5, IFAU)**

A report on the most applicable, ‘Sustainability indicators for legume supported food and feed systems’ will be drafted with input from earlier activities in WP4. This will be iterated with data from the other WPs to help develop ‘transition to sustainability’ models (WP8). This report will be made public through the TRUE website.

### **Reports on Practices for Commercialisation (D28/D4.6, IFAU)**

A guidance document on ‘Best practices for commercialisation of legumes’ will be targeted for delivery to business stakeholders (and policy makers), as a synthesis from the broader and more detailed D4.5 report (on ‘Sustainability indicators for legume supported food and feed systems’). This report will be made public through the TRUE website.

### **Annual Activity Plan – Year III (D53/D9.5, JHI)**

Reported here in this document.

### **Update DMP, Database Populated (D14/D2.4, AUA)**

From month 6, and annually thereafter for years 2 and 3, a Data Management Plan (DMP) will be drafted to ensure all dataset types and explanatory metadata are captured to facilitate long-term utility of the information gathered. The data will encompass a library of Standard Operating Procedures (SOPs) for key techniques and includes historical datasets and other databases as appropriate including other projects - Legume Futures, LegSA, Eurolegume, Legato, Protein2Food. Data acquisition extends to provision of published outputs be they meeting abstracts, data highlights and key findings including images and video shorts *etc.* The year 4 DMP will fully establish the TRUE project ‘data-legacy handling’ strategy, which will extend beyond the life of the project.



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### **Delphi for favourable governance contexts (D42/D7.3, ESSRG)**

This report, ‘Developing new governance solutions for legume-dependent systems’, will describe road-maps which may meet the expectations of a wide range of different actors’ groups across the supply chain. The findings will be shared in a range of languages of the European Union. The report will be guided by the results of web-based Delphi surveys of legume chain actors to a range of potential policy solutions. Iteration in this process will allow resolution of favourable policies and transition pathways.

### **Scientific, Practice and Policy Publications – Year II (D6/D1.6, UHOH)**

Annually, data and key outputs/deliverables will be gathered by WP1 and synthesised into practical briefing media such as notes for stakeholders, to inform members of the public of new insight and products *via* press releases, including trade press. These will be circulated in a range of languages of the Regional Clusters and will also be aimed to policy-makers at regional, national and EU level. This report will be made public through the TRUE website.

### **Summary leaflet of Attributional LCA (D30/D5.2, BU)**

Key outputs to be exploited by WP4 (and eventually for sustainable pathway analysis, WP8), will be summarised here. The leaflet will highlight key methodological issues and footprint results for legume food and feed products.

### **LCA Database for Open Access (D31/D5.3, BU)**

A ‘Life cycle analysis database’, will be made available for Open Access *via* the project website (WP1), and collated on the project Database (WP2). This data will allow public access to a unique collection of processes and emission factors specific to legume-based food and feed product value chains.

### **European diets environmental impact & nutrition (D33/D5.5, TCD)**

Report on ‘European legume-based diets: environmental impact and nutritional qualities will relate environmental burden of the food chain to nutritional qualities of food items. The approach will be developed from publicly available data on European diets, which will range from ‘typical’ to ‘Mediterranean’ and ‘vegetarian’ and scored with respect to their relative environmental and health impacts.

### **Environment and nutri-economic assessments of European diets – Report I (D34/D5.6, TCD)**

A stage-1 report on ‘The environment and nutri-economic assessments of legume-enriched European diets’ will present the initial assessments that aim to identify the key-features underpinning the functional relationship between legume inclusion, nutritional provision and environmental impact.



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### **Definition of Sustainability Indicators for WP8 (D36/D6.1, SRUC)**

A report defining sustainability indicators and trade-offs will inform the modelling of transition design by WP8. The report will describe how economic modelling has identified those key features of favourable regions for legume-based cropping systems -in terms of political framework, profitability and environmental benefits. The report will indicate which on-farm scenarios can impact positively on economic and ecological performance simultaneously.

### **Behavioural analysis of farmers uptake and consumers choice (D37/D6.2, SRUC)**

This report will detail the key decision-making factors for farmers and consumers in a comparative appraisal across a range of European countries/cropping system scenarios. The report will therefore inform how we may operate more effectively to affect behavioural change positively towards legume inclusion.

### **Scenarios for upscaling production, including economic and trade indicators – Report I (D38/D6.3, SRUC)**

A dataset and report describing key results where the cropping system *status quos* are assessed in a comparative analysis against outcomes of legume-innovation uptake (e.g. precision agricultural, inorganic nitrogen use avoidance, dietary change to reduce meat intake, changed EU policies such as CAP). The report will detail the impacts of legume production under the different scenarios on the overall production and land use.

### **Decision support models: environment/economy/policy/legume systems (D45/D8.2, SRUC/JSI/TCD/BU)**

A series of decision models (modules) will be produced for the assessment of the environmental/economic/policy pillars of sustainability of legume systems - as informed by the various case studies (WP2), LCA (WP5), and summary of expert knowledge (D8.1) – considering different climatic zones, crops and production pathways.

## Impact plan from Stakeholder Advisory Board (Version I, D56/D9.8, JHI)<sup>1</sup>

The Impact Plan report will be heavily directed by feedback from TRUEs Stakeholder Advisory Board (SAB, the commercial partners), and other multi-actors engaged *via* the ISAB (Intercontinental Science Advisory Board), and including operatives of the Regional Clusters, existing relevant H2020 research projects, and successful RUR (rural renaissance) project(s). This direction will help ensure research complementarity, synergy and science excellence. The ultimate aim of this report is to define the best routes to impact.

## 2. Year 3 Milestones

**Table 3.** The milestone scheduled to be submitted during Year 3 of the TRUE project.

No.	Title	Lead Contributor	Due Date
5	Results of systematic review	AUA	Jul. 31 <sup>st</sup> 2019
8	Legume system sustainability indicators	IFAU	May 31 <sup>st</sup> 2019*
9	Completion of legume LCA database and methodology	TCD	Sep. 30 <sup>th</sup> 2019
10	Legume system Sustainability Indicators (LCA of food/commodity choice), for use in Transition Path Modelling	TCD	Sep. 30 <sup>th</sup> 2019
11	Legume system Sustainability Indicators (economics and farmer behaviour), for use in Transition Path Modelling	SRUC	Sep. 30 <sup>th</sup> 2019
13	Annual meeting with all partners - Year III	JHI	Mar. 31 <sup>st</sup> 2020
17	Environment-impact assessed transition scenarios	JSI	Mar. 31 <sup>st</sup> 2020
24	Update on estimates of regional production functions and scenarios	SRUC	Mar. 31 <sup>st</sup> 2020

\* New estimated Delivery Dates described in the Grant Amendment (AMD-727973-75) launched April 2019.

<sup>1</sup> This important activity will become a major focus for the project throughout all activities during the final 2 years of the TRUE project. It will also seek to inform another important and related TRUE Deliverable (D9.9, the Project Legacy Plan, Version I), which is due for submission just one month later. D9.9 seeks to scope the role of TRUE insights and products in future initiatives such as:

- new project proposals, [European Innovation Partnerships](#) (EIP) and [Focus Groups](#);
- [thematic networks](#); and,
- to help inform EU, national and regional sustainable agri-food system policy agendas.

### 3. European Legume Innovation Networks (ELINs)

**Table 4.** Details of which partners will host the various ELIN workshops, as well as their locations and approximative dates. The light-green shaded rows denoting ELINs which have already been delivered.

ELIN	Project Year	Host Beneficiary	Place	Date
Atlantic	1	PGRO	Peterborough, UK	13-14/12/17
	2	IFAU	Denmark	07/05/19
	3	Teagasc	Ireland	May/June '20
Continental	1	UHOH	Stuttgart, Germany	21-22/11/17
	2	ESSRG & AK	Budapest, Hungary	11-14/09/18
	3	JSI	Slovenia	16-17/09/19
Mediterranean	2	AUA	Athens, Greece	20/04/18
	3	UCP	Porto, Portugal	09/07/19
	4	Solintagro	Spain	June/July '20
Combined	4	TRUE	Scotland House, Brussels (TBC) <sup>2</sup>	2020/21

#### Atlantic ELIN (A-LIN) workshops

##### Year 2: Processing & new markets (DK)

The second Atlantic LIN (A-LIN) will take place in Denmark on May 7<sup>th</sup> 2019 and will be organised by IFAU. The event will focus on enabling legume-based supply chains: novel processing and the importance of marketing.

##### Year 3: Organic Meat Systems (IE)

The exact focus is to be determined, although it is anticipated that there will be a focus on forage-based legumes and animal (bovine) feeds. Preliminary discussions have entertained the idea of engaging the stakeholders to understand and increase the uptake of clover in Ireland (what are the barriers and opportunities?). Further discussion will take place during Year 3 of the project to narrow down the focus of the workshop.

<sup>2</sup> TRUE and LegValue are in discussion to deliver the Objective of 'Pulse Europe' as a joint venture and at a joint meeting in Brussels. This may combine the final General Assembly meetings of both projects in a single event.



## **Continental ELIN (C-LIN) workshops**

### **Year 3: Agri-Food Systems (SI)**

The 3rd C-LIN workshop will take place in Slovenia and organised by JSI. The focus will be on the sustainability of agri-food chains. Current plans involve the invitation of stakeholders from the different nodes in the agri-food chain based on the following structure:

- introduction to sustainability;
- presentation of the legume systems and agri-food chains in Slovenia;
- interactive SWOT analyses of different links in the agri-food chain;
- plenary discussion with invited representatives of the agri-food sector;
- visit of three enterprises representing different links in the agri-food chain.

## **Mediterranean ELIN (M-LIN) workshops**

### **Year 3: Sustainable-consumption and -diets (PT)**

The second Mediterranean LIN (M-LIN) will take place in Portugal on July 9<sup>th</sup> 2019. This one-day event will focus on the consumers and sustainable diets and hope to engage Stakeholders to share their experiences and results and to give their valuable input on how legumes may play a crucial role in promoting more environmentally-friendly and healthy diets. The programme also aims to provide insights into how consumers, citizens, public bodies, policy agencies and industry are shaping the way society voluntarily or involuntarily make food choices on a daily basis.

### **Year 4: Production (TBC)**

Plans for the Year 4 ELIN workshop will be discussed at the end of year 2.

## **Legume Innovation Network (LIN) workshop data/reports**

The reports detailing discussions and recommendations of the first 3 ELIN workshops have been collated and are available on the TRUE website and TRUE database.

## 4. General Assemblies

**Table 5.** List of General Assembly meetings by project year, with the location, main organiser (host) and dates.

Year	Title	Location	Main Organiser	Date
2017	Kick-off meeting (1st General Assembly)	Edinburgh, UK	JHI	18-21/04/17
2018	2 <sup>nd</sup> General Assembly	Athens, GR	AUA	16-19/04/18
2019	3 <sup>rd</sup> General Assembly	Porto, PT	UCP	10-12/07/19
2020	4 <sup>th</sup> General Assembly	Stuttgart, DE	UHOH	06/20 (TBC)
2021	Final Meeting & launch of the LIN	Brussels, BE (tbc)	JHI	03/21 (TBC)

### 3<sup>rd</sup> General Assembly

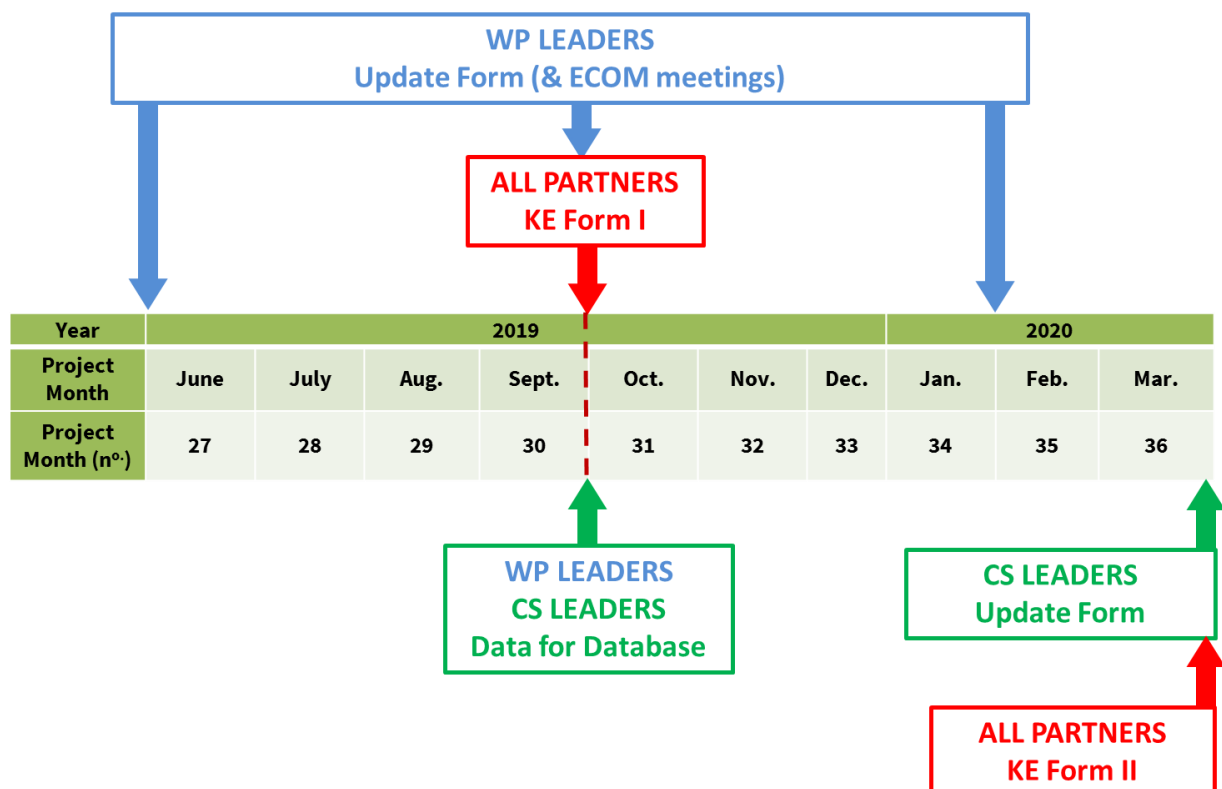
The event is currently being organised by UCP, EUR and JHI and will take place in Porto, Portugal from July 10<sup>th</sup> to 13<sup>th</sup> 2019. The 3<sup>rd</sup> General Assembly will review the second year of project implementation and set out guidelines for the next project year. The current programme features presentations from the WP Leaders and the ISAB member(s) attending the meeting (Mike Grusak) as well as a Legume cooking workshop. This year, time has also been allocated to the CS Leaders to present their progress and results during flash presentations (5 minutes each). Outputs of the meeting will be uploaded to the TRUE website after the event.

## 5. Second Periodic Review

At the beginning of Year 4 of the project (May 2020), TRUE will submit its second Periodic Report to the EC, summarising all project activities and achievements covering the period of October 2018 to March 2020. **Critically, successful completion of this review is essential to ensure the continued support of the TRUE project by the European Commission. Towards that end, the Work Package-, Case Study-, KE-Update Forms plus data for the TRUE database play an important part in being able to deliver a successful Periodic Report.**

### 5.1 Work Package-, Case Study- and Knowledge Exchange-Reporting

Templates for Work Package (WP) Leaders, Case Study (CS) Leaders and all-partners Knowledge Exchange (KE) reporting have been prepared and are available on the TRUE SharePoint ([here](#)). Their aim is to ease the completion of the Periodic Reporting *and* to help ensure robust management and flow of data. Several types of data gathering exercises are necessary and outlined below.



**Figure 1.** A summary of the key deadlines for submission of the various update- and data-forms for the forthcoming project year.





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### Work Package Leaders Update Forms

A WP update report template has been circulated to WP Leaders, which is to be returned **every 4 months**, just ahead of the Executive Committee (ECOM) e-meetings, or face-to-face ECOM at the General Assemblies. These are intended to be **brief** documents to summarise progress in broad terms, and to highlight the RAG (Red, Amber, Green) status of WP Milestones and Deliverables.

### Case Study Leaders Update Forms

Specific templates are available for each CS leader to use for reporting ([here](#)). These reports should be **brief** and are aimed to summarise CS activities and RAG status on progress submitted at **the end of each project year (by March 31<sup>st</sup>, or earlier)**. The report also summarises trials to be carried out that year, and so the data expected by the database manager.

### All partners KE (Knowledge Exchange) Forms

Specific templates have been circulated for each partner to use for KE reporting ([here](#)). These forms are updated twice annually, at **the 6- and 12-month stages in every project year**.

### Data Provision for the TRUE Database

CS or WP data gathered in any one project year should be declared and submitted to the Project Manager (Dr Fanny Tran) by the endpoints described in Figure 1. All WP- and CS- Update Forms should specify (in the dedicated table) the project year in which data will be gathered. Data are expected as soon as possible, and **no later than Sep. 30<sup>th</sup>, in the year immediately after each data-gathering year**. These should be provided as follows.

- **Metadata Entry Form (MEF) and Trial Data:** WP and CS Leaders have been given access to a MEF template that captures experimental metadata ([here](#)). A single MEF will accompany a single dataset for each CS or WP activity. Together a single MEF and data file for each individual trial should be sent to the Project Manager for checking and ultimately submission to the TRUE database.
- **Specific Methods or SOPs (Standard Operating Procedures)** used to gather the data should also be provided using the SOP template ([here](#)).

### The TRUE 'Impact Strategy and Legacy Plan'

Collectively, the WP, CS and KE Forms are important documents and they have been carefully designed to provide information and data which has been either specifically requested by the EC for Periodic Reports, or to inform various elements of the TRUE work-plan including data-flow and so the development of the Data Management Plan (DMP) and Decision Support System tools. The content of the WP and CS Update Forms are also extended to capture key innovations that are being developed. In addition, a **scoping exercise** is currently underway, which identifies the best **routes to commercial exploitation of methods** tested and/or developed, also for novel **products** generated for human, animal and aquaculture markets. The recently submitted Deliverable D3.2 on 'Scoping Licencing and Patent Filling' serves as an opportunity to establish TRUE's *modus operandi* with respect to Intellectual Property Rights (IPR) and the foundation for TRUE's "**Commercial Exploitation Strategy**".



This strategy will help:

- ensure the IPR and Innovations stemming from the project are **properly exploited and protected**;
- **secure the project legacy** and be used to **showcase** the varied type of outputs produced by TRUE;
- ensure all products and tools generated **fully acknowledge the project and its funding body**<sup>3</sup>.

A newly designed **TRUE Innovation and IP Form** has recently been circulated to all partners, whom have been asked to **carefully and critically re-evaluate any potential IPR and Innovations**.

## 5.2 Periodic Report

The Periodic Report comprises **two** main components (PART A and PART B). These are described briefly below.

### PART A

This section of the report contains information uploaded to the reporting modules contained within the EU Participants' Portal (ECAS), SyGMA system. **To complete this section of the report, information will be gathered mainly from the WP-, CS- and KE-Update Forms** to address the following:

1. **Publishable Summary** (Context and overall objectives of the project, Work performed - project outset to reporting period end and Progress beyond the state of the art (achieved or anticipated))
2. **Deliverables**
3. **Milestones**
4. **Ethical issues**
5. **Critical implementation risks and mitigation actions** (Foreseen, Unforeseen and States of play for risk mitigation)
6. **Dissemination and exploitation**<sup>4</sup> (Scientific publications and Dissemination and communication activities)
7. **Intellectual Property Rights**<sup>5</sup> (Details on either new 'Patents', 'Trademarks', 'Registered design', 'Utility model' and 'Other')

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<sup>3</sup> The TRansition paths to sUustainable legume-based systems in Europe (TRUE) project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 727973.

<sup>4</sup> Information collated from the "KE Recording Form"

<sup>5</sup> Information collated from the Update Forms.



8. **Innovation**<sup>3</sup> (Numbers of ‘prototypes’, ‘testing activities’ and ‘clinical trials’; and new ‘products or services’, ‘processes’ or ‘methods’)
9. **Impact on SMEs**<sup>6</sup>
10. **Databased Information**<sup>3</sup>
11. **Gender of researchers and other workforce involved in the project**<sup>7</sup>
12. **Financial Statements**<sup>8</sup>

## PART B

This section of the report, known as the **Technical Report**, should summarise all the work carried out within the reporting period. WP Leaders have been provided with a template to describe all the results obtained and activities performed by all partners towards completing their specific tasks. Input is therefore required from all partners to create the narrative of the Technical report, which should reflect the financial statements submitted to the Project Manager.

## 6. Legume Innovation Network

TRUE has committed in the Grant Agreement to establish a network of legume-based industry partners that is at least Europe-wide in its inclusive coverage. This forum is focused to empower more profitable and sustainable legume-based supply chains and was originally called “Pulse Europe”. However, the consensus of opinion is that this should be altered, to the “Legume Innovation Network”, building upon the similarly named and successful structures already operational within TRUE. Towards that purpose, iterative discussion has been ongoing throughout years 1 and 2 to develop a strategic framework to realise the formation and first meeting of the LIN. This initiative is led by PGRO in partnership with UHOH, JHI and in consultation with the Coordinator of our sister project (Frederic Muel, [www.legvalue.eu](http://www.legvalue.eu)). Over the next project year (Year 3), it is anticipated that the progress will be made to:

- circulate the draft LIN strategic plan to partners within TRUE and LegValue for comment, and as necessary, revision of the strategic framework;
- pre-organise the LIN formation event which is scheduled at the end of Year 4 (and before the end of 2020);
- advertise for LIN members as part of the co-organisation of a conference which will take place in 2021. This conference will be held in partnership with PGRO & LegValue to launch the LIN.

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<sup>6</sup> For SMEs only, request will be sent by the Project Manager ahead of the deadline.

<sup>7</sup> For all partners, a separate form will be circulated by the Project Manager ahead of the deadline.

<sup>8</sup> Partners to enter their own financial statement on the SyGMA portal. Check will be done by the Project Manager and the statement return if incomplete.



## Disclaimer

The information presented here has been thoroughly researched and is believed to be accurate and correct. However, the authors cannot be held legally responsible for any errors. There are no warranties, expressed or implied, made with respect to the information provided. The authors will not be liable for any direct, indirect, special, incidental or consequential damages arising out of the use or inability to use the content of this publication.

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## Annex I – Background to the TRUE project

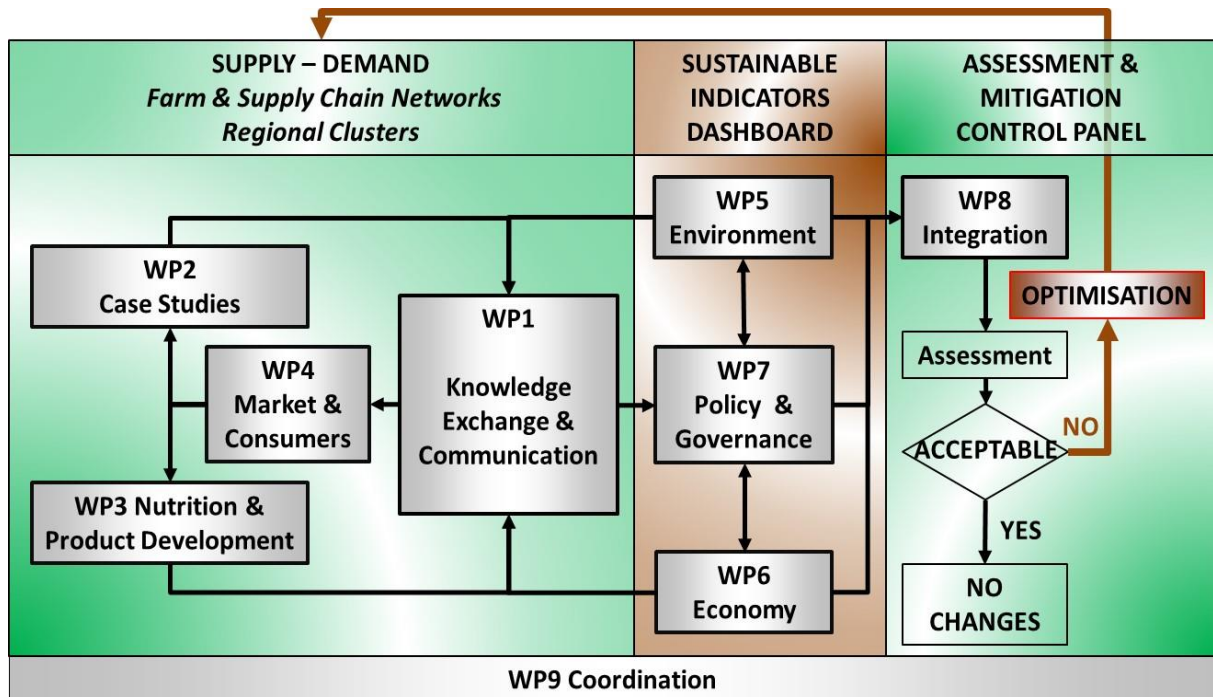
### *Executive Summary - Abbreviated*

TRUE's perspective is that the scientific knowledge, capacities and societal desire for legume supported systems exist, but that practical co-innovation to realise transition paths have yet to be achieved. TRUE presents 9 Work Packages (WPs), supported by a *Intercontinental Scientific Advisory Board*. Collectively, these elements present a strategic and gender balanced work-plan through which the role of legumes in determining 'three pillars of sustainability' – 'environment', 'economics' and 'society' - may be best resolved.

TRUE realises a genuine multi-actor approach, the basis for which are three *Regional Clusters* managed by WP1 ('*Knowledge Exchange and Communication*', University of Hohenheim, Germany), that span the main pedo-climatic regions of Europe, designated here as: *Continental*, *Mediterranean* and *Atlantic*, and facilitate the alignment of stakeholders' knowledge across a suite of 24 Case Studies. The Case Studies are managed by partners within WPs 2-4 comprising '*Case Studies*' (incorporating the project database and *Data Management Plan*), '*Nutrition and Product Development*', and '*Markets and Consumers*'. These are led by the Agricultural University of Athens (Greece), Universidade Catolica Portuguesa (Portugal) and the Institute for Food Studies & Agro Industrial Development (Denmark), respectively. This combination of reflective dialogue (WP1), and novel legume-based approaches (WP2-4) will supplies hitherto unparalleled datasets for the '*sustainability WPs*', WPs 5-7 for '*Environment*', '*Economics*' and '*Policy and Governance*'. These are led by greenhouse gas specialists at Trinity College Dublin (Ireland; in close partnership with Life Cycle Analysis specialists at Bangor University, UK), Scotland's Rural College (in close partnership with University of Hohenheim), and the Environmental and Social Science Research Group (Hungary), in association with Coventry University, UK), respectively. These *Pillar WPs* use progressive statistical, mathematical and policy modelling approaches to characterise current legume supported systems and identify those management strategies which may achieve sustainable states. A *key feature* is that TRUE will identify key *Sustainable Development Indicators* (SDIs) for legume-supported systems, and thresholds (or goals) to which each SDI should aim. Data from the *foundation WPs* (1-4), to and between the *Pillar WPs* (5-7), will be resolved by WP8, '*Transition Design*', using machine-learning approaches (e.g. *Knowledge Discovery in Databases*), allied with *DEX* (*Decision Expert*) methodology to enable the mapping of existing knowledge and experiences. Co-ordination is managed by a team of highly experienced senior staff and project managers based in The Agroecology Group, a Sub-group of Ecological Sciences within The James Hutton Institute.

### Work Package Structure - Diagram

Flow of information and knowledge in TRUE, from definition of the 24 case studies (left), quantification of sustainability (centre) and synthesis and decision support (right).





### Project Partners - Table

No	Participant organisation name (and acronym)	Country	Organisation Type
1 (C <sup>*</sup> )	The James Hutton Institute (JHI)	UK	RTO
2	Coventry University (CU)	UK	University
3	Stockbridge Technology Centre (STC)	UK	SME
4	Scotland's Rural College (SRUC)	UK	HEI
5	Kenya Forestry Research Institute (KEFRI)	Kenya	RTO
6	Universidade Catolica Portuguesa (UCP)	Portugal	University
7	Universitaet Hohenheim (UHOH)	Germany	University
8	Agricultural University of Athens (AUA)	Greece	University
9	IFAU APS (IFAU)	Denmark	SME
10	Regionalna Razvojna Agencija Medimurje (REDEA)	Croatia	Development Agency
11	Bangor University (BU)	UK	University
12	Trinity College Dublin (TCD)	Ireland	University
13	Processors and Growers Research Organisation (PGRO)	UK	SME
14	Institut Jozef Stefan (JSI)	Slovenia	HEI
15	IGV Institut Fur Getreideverarbeitung GmbH (IGV)	Germany	Commercial SME
16	ESSRG Kft (ESSRG)	Hungary	SME
17	Agri Kulti Kft (AK)	Hungary	SME
18	Alfred-Wegener-Institut (AWI)	Germany	RTO
19	Slow Food Deutschland e.V. (SF)	Germany	Social Enterprise
20	Arbikie Distilling Ltd (ADL)	UK	SME
21	Agriculture And Food Development Authority (TEAG)	Ireland	RTO
22	Sociedade Agrícola do Freixo do Meio, Lda (FDM)	Portugal	SME
23	Eurest -Sociedade Europeia De Restaurantes Lda (EUR)	Portugal	Commercial Enterprise
24	Solintagro SL (SOL)	Spain	SME

\*Coordinating institution



### **Objectives - Abbreviated**

#### **Objective 1: Facilitate knowledge exchange (UHOH, WP1)**

- *Develop a blue-print for co-production of knowledge*

#### **Objective 2: Identify factors that contribute to successful transitions (AUA, WP2)**

- *Relevant and meaningful Sustainable Development Indicators (SDIs)*

#### **Objective 3: Develop novel food and non-food uses (UCP, WP3)**

- *Develop appropriate food and feed products for regions/cropping systems*

#### **Objective 4: Investigate international markets and trade (IFAU, WP4)**

- *Publish guidelines of legume consumption for employment and economic growth*
- *EU infrastructure-map for processing and trading*

#### **Objective 5: Inventory data on environmental intensity of production (TCD, WP5)**

- *Life Cycle Analyses (LCA) -novel legumes rotations and diet change*

#### **Objective 6: Economic performance - different cropping systems (SRUC & UHOH, WP6)**

- *Accounting yield and price risks of legume-based cropping systems*

#### **Objective 7: Enable policies, legislation and regulatory systems (ESSRG, WP7)**

- *EU-policy linkages (on nutrition) to inform product development/uptake*

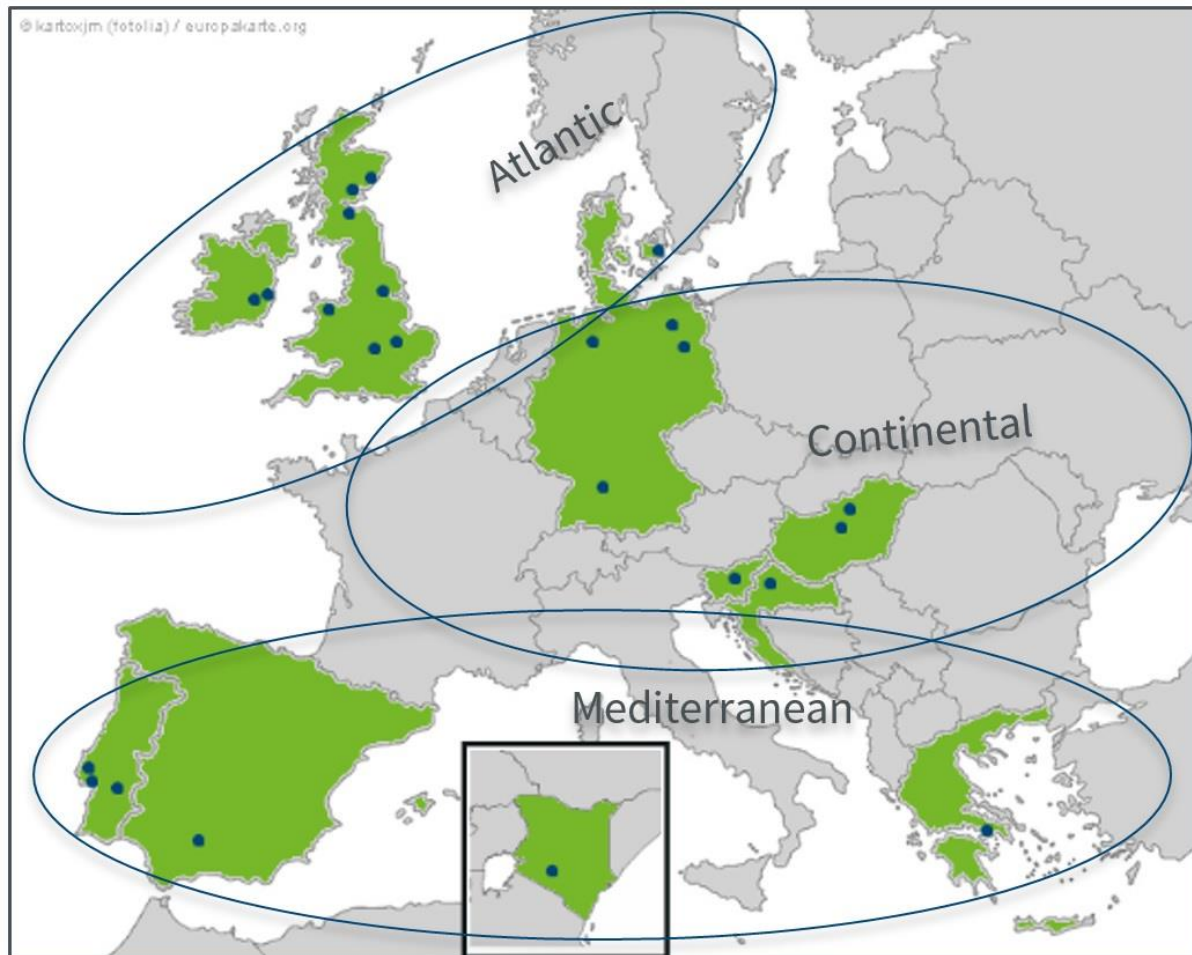
#### **Objective 8: Develop decision support tools: growers to policy makers (JSI, WP8)**

- *User friendly decision support tools to harmonise sustainability pillars*



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### Regional Cluster & Case Studies – Diagrams



Knowledge Exchange and Communication (WP1) events include three TRUE European Legume Innovation Networks (ELINs) and these engage multi-stakeholders in a series of focused workshops. The ELINs span three major pedoclimatic regions of Europe, illustrated above within the ellipsoids for Continental, Mediterranean and Atlantic zones.