# Interoperability in Action: Workshop #4

## Social Protection Information System Interacting with Farmer Registry





### Veronika Wodsak Social Protection Policy Specialist International Labour Organization (ILO)



# Agenda

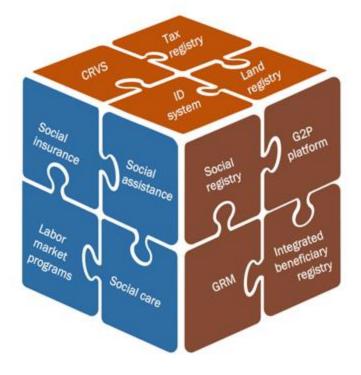
12:10–12:40	Integration of SP-MIS, Farmer Registry (Presentation & Demonstration)
12:40–13:30	Lightning talks (Angola, India, Kenya, Lebanon and FAO)
13:30–13:50	Open Discussion
13:50–14:00	Conclusion
	Digital

## The Digital Convergence Initiative (DCI)

A joint effort by USP2030 members and non-members, governments, development partners and private sector towards creating a harmonized and interoperable digital ecosystem for social protection

#### Building consensus-based standards for interoperability to

- **foster an ecosystem for innovation** by ICT solution providers to build products that are interoperable, easy to use, integrate, maintain and scale
- reduce time and costs of developing solutions at the country/program level
- enable programs and countries to mix and match different components from different suppliers
- ensure that systems are future-proof by design, regardless of current levels of policy and information systems maturity





# Interoperability in Action

Workshops series by DCI to demonstrate live interoperability of SP-MIS with other systems for effective and efficient delivery of Social Protection (SP) programs.

Deep dive into one interface showcasing SP system interaction with other systems (like payment, CRVS, ID, Farmer Registry)

•share the understanding of process workflow, data elements, and technical

APIs that are required for interoperability.

create awareness on the benefits of interoperability through use-cases
demonstrate live the interoperability using digital public goods for some use cases

•hear from the stakeholders and subject matter experts on the topic



# Interoperability in Action – Past workshops

DCI - Interoperability in Action #1: Social Protection Information System - Interacting with ..

## Interoperability in Action: Workshop #1

Social Protection Information System Interacting with CRVS

### **Interoperability in Action : Workshop #2**

Social Protection Information system interacting with Payment System

## Interoperability in Action : Workshop #3

Social Protection Information system interacting with Identification

System

MORE VIDEOS

Past Workshop recording: https://spdci.org/events/?past\_events





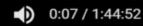
USP2030



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Share

#### ergence



## Steering Committee - Digital Convergence Initiative



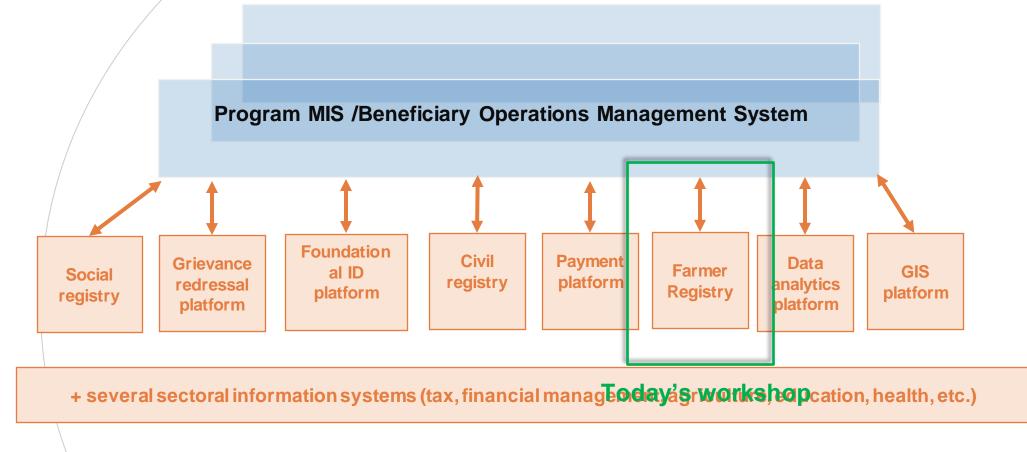
International Labour Organization





giz

## Systems at Play for SP Program Delivery







### **Anita Mittal**

# Senior Advisor, Digital Convergence Initiative, GIZ



### Farmer registries and social protection information systems :

Harnessing interoperability to improve outcomes for rural populations



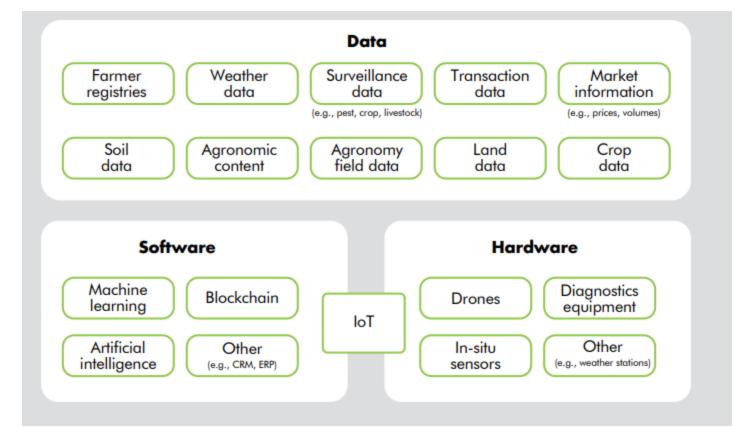
- Increasing use of farmer registries –for supporting the development and delivery of tailored and differentiated programs to small-scale food producers and vulnerable rural populations.
- Increasing use of Social protection systems (social registry, MIS, and integrated beneficiary registry) for delivery of social protection to the poor and the vulnerable.
- Recent experiences across a range of countries highlight how the two information systems serving the agricultural and social protection sectors can 'speak' to each other to maximise mutual benefits and enable better support to smallholder farmers and other groups.

#### FAO and GIZ recently published a paper on

"Farmer registries and social protection information systems -Harnessing interoperability to improve outcomes for rural populations "



# Farmer registry and related systems

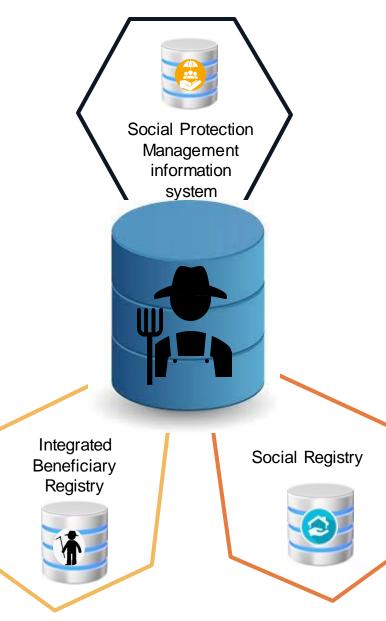


*Type of data collected and managed - ranges widely but may include:* 

- a) Demographic and basic socio-economic data on farmers and their households: Land and livestock holding data:
- b) land parcel ownership, rental and use; permits/access rights (e.g. for fishing); animal/livestock ownership; machinery ownership; access to irrigation; where possible (via satellite imagery etc) information on land degradation, crop condition monitoring and yield forecasting.



## Farmer Registry interoperability with Social Protection systems

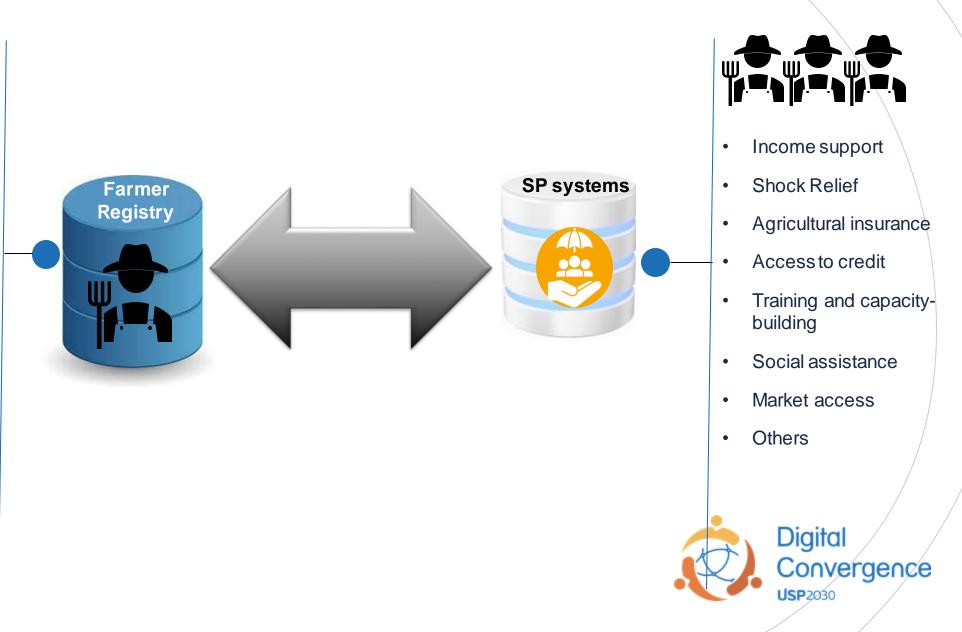




## Social protection delivery to farmers leveraging interoperability

Demographic and basic socio-economic data on farmers and their households:

- Age / Education / Occupation / Livelihood
   / Disability status / Income
- Land and livestock holding data:
  - Land parcel ownership, rental, and use / Permits (e.g., for fishing) / Animal / livestock ownership /crop condition monitoring )





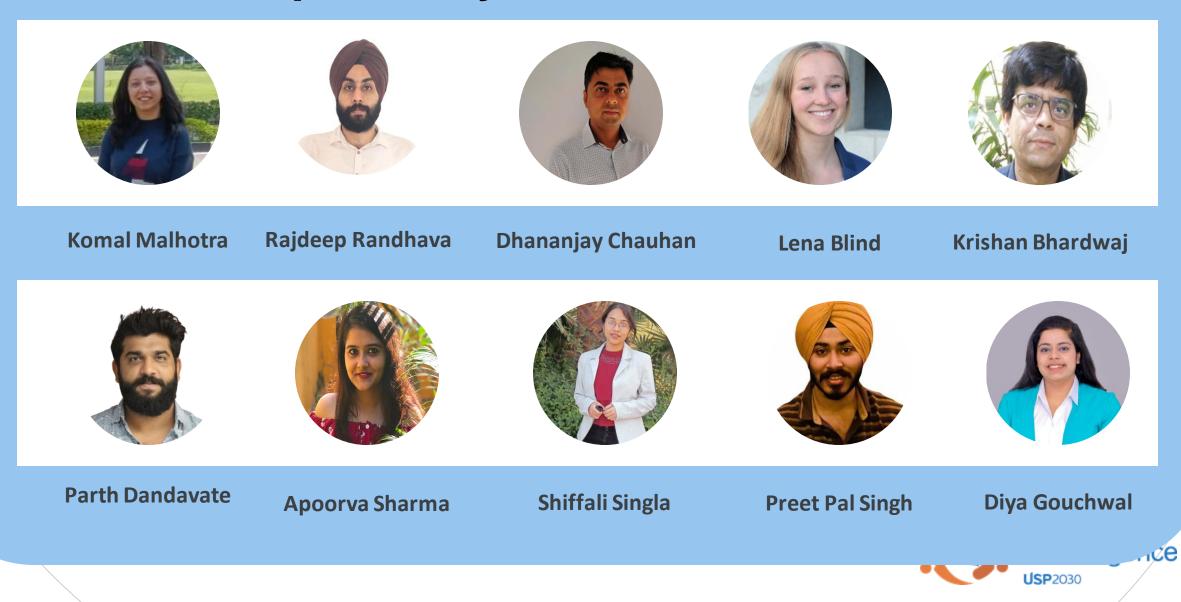
# **Country Briefs**

based retirement



integrations via Kutumba

## **Interoperability in Action: The Team**



## **Use Case Discussion**

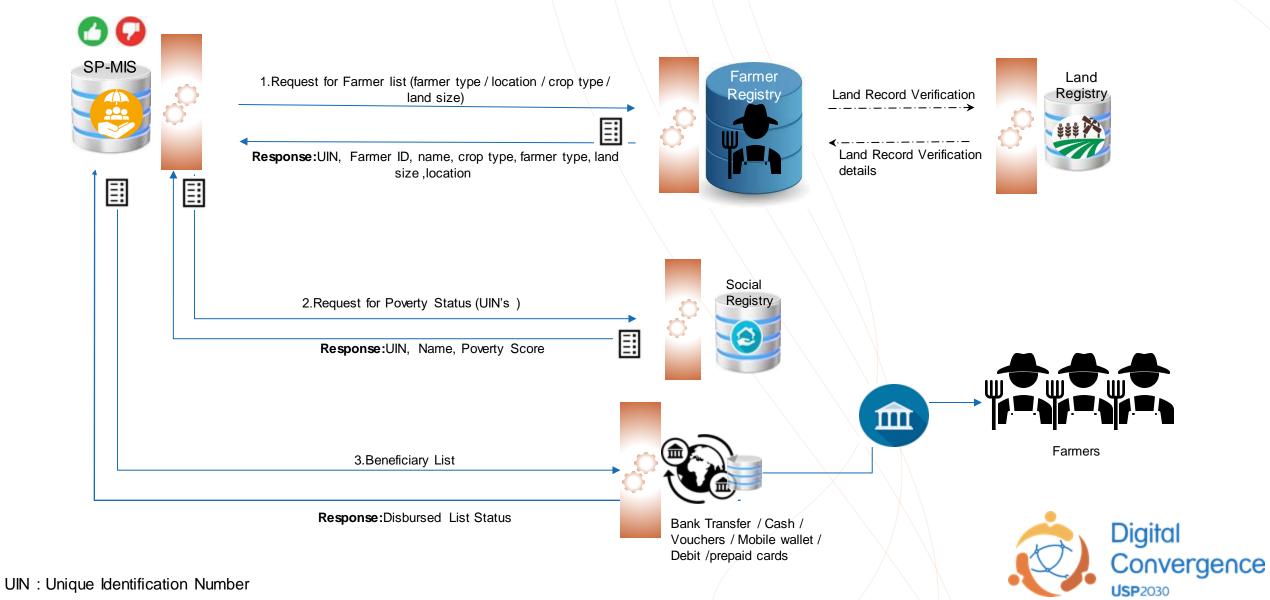




# Farmer Shock Relief Program



# Farmer Shock Relief Program



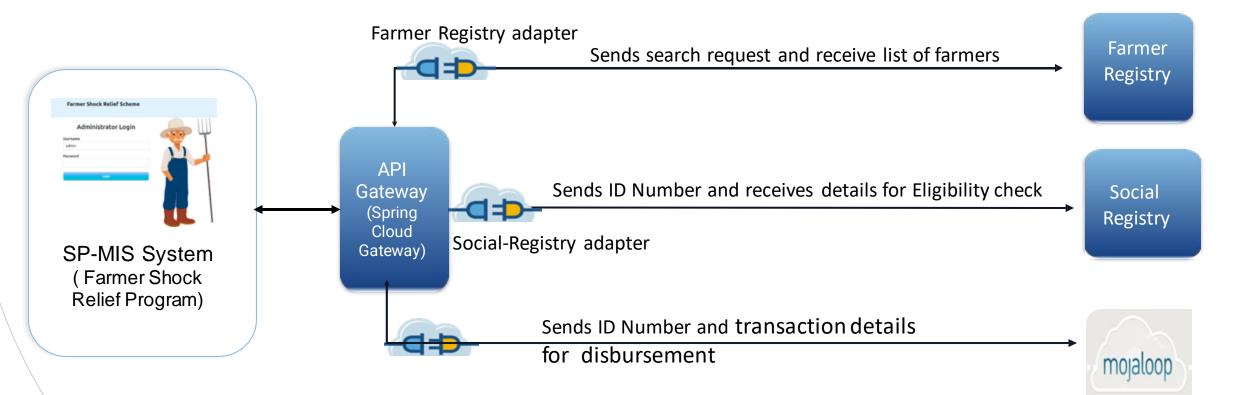
References Studied: India, Philippines, Ethiopia, Brazil, Belize, Colombia

1

# **Sandbox Environment**



# Sandbox Environment







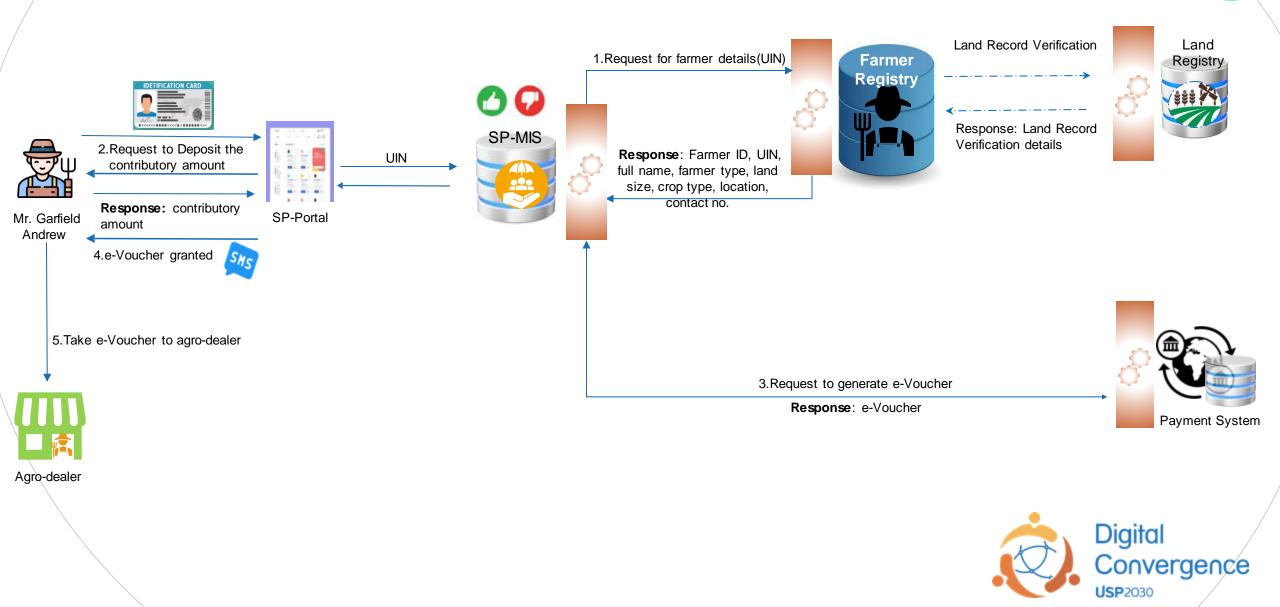
# Demonstration







## Farmer e-Voucher Issuance Program



Country referred which include e-voucher program for farmers - Zimbabwe, Malawi, Zambia, Uganda, Kenya, Tanzania and others

2



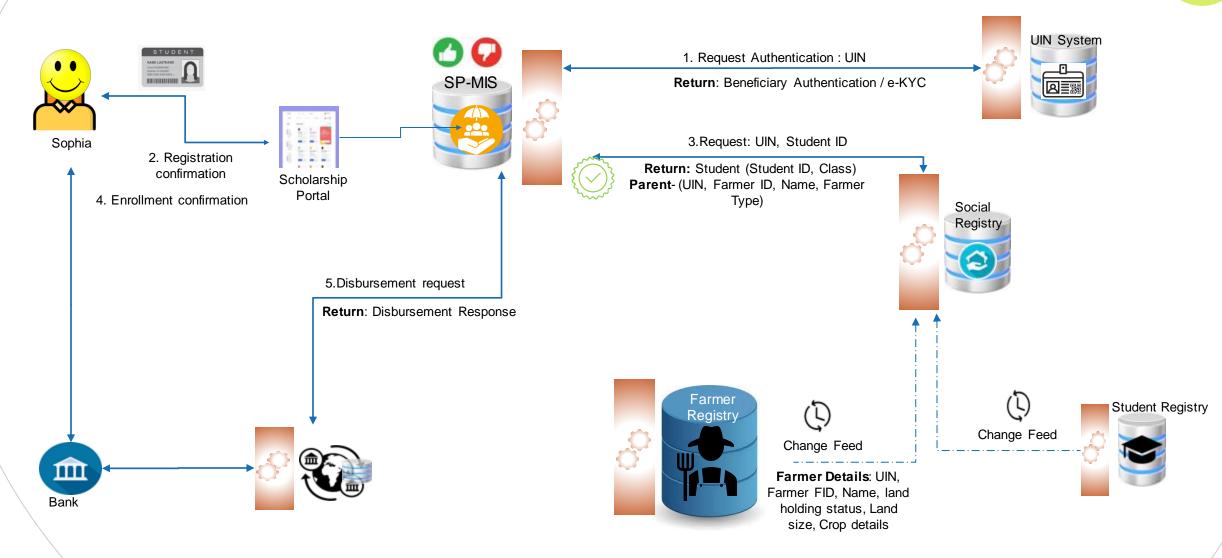
# Demonstration







# Farmer Child Scholarship Program



UIN: Unique Identification Number Reference studied : India



3

# **Standards**

Data Standards, Code Directories and APIs



## Sample Data Standards and Code Directories

	Name	Cardinality	Туре	Code Directory	]
Identifie	er type	01	Code		
ldentifie	er value	01	string		
Person	Name	0*	HumanName		
Contact	t Number	0*	ContactPoint		
Gender		01	Code	CD04	
Occupat	ation	01	Code	CD99	
Land Inf	formation	0*	LandInfo		
Locatior	n	0*	Address		
Farmer	Туре	01	C F	armer Type (C	ode Directory)
Crop	Type(Code	Directory)	Code	CD10	
Mc	ore to the list				]

Crop Type (Code Directory)					
Code Directory	de Directory Name Values				
	Сгор Туре	Food Crops			
CD10		Feed Crops			
		Fiber Crops			
		Oil Crops			
		Ornamental Crops			
		Industrial Crops			

Code Directory	Name	Values	
		Marginal Small	
CD08	Farmer Type	Medium	
		Large Sharecropper	
		Tenant	
		Owner	
		landless	

Farmer Type(Code Directory)



jence

## Farmer Registry - Search API

URL	{host}/v1/search	Method	POST
Headers	Authorization: Bearer (JWT Access Token)	Content-Type	application/json
Request			Response
"filtergroups": [ {     "groupid": "A",     "fields": [     {         "fieldname": "cu         "operator": "equ         "value": "foodcr         "nextfieldoperat     },{         "fieldname": "re         "operator": "equ         "value": "south-         "nextfieldoperat     }]     }],     "sortby":     { "fieldname": "name":	uals",       Crop type=foodcrop         op",		NAL_ID", "value": "345678912"}, ER_ID", "value": "IN-DL-23-000456"} psy", ee", "", st", all",
}		}	

## e-Voucher Creation Request - API

URL	{host}/evoucher/generate	Method	POST	
Headers	Authorization: Bearer (JWT Access Token) with other headers	Content-Type application/json		
Request		Response		
<pre>{     "request_id":"0c96614c-7255-4774-b109-cd53ee851769"     "beneficiary_id": "34569818",     "program id": "evoucher_123",     "issuer_id": "evoucher_issuer",     "issuer_id": "2023-04-23T15:20:00",     "payment system": "Moja_payment",     "amount": "2000",     "currency": " ,     "expiration_date": "2023-07-27" }</pre>		Response		



## e-Voucher Issuance to Farmer - API

URL	{host}/evoucher/issue	Method	POST
Headers         Authorization: Bearer (JWT Access Token)		Content-Type	application/json
	Request		Response
<pre>{     "evoucher_number":"75839380039548",     "beneficiary_id": "34569818",     "program_id": "evoucher_123",     "issuer_id": "evoucher_issuer",     "issued_at": "2023-04-23T15:55:00",     "payment_system": "Moja_payment",     "expiration_date": "2023-07-27" }</pre>		<pre>{     "issuance_id":"12400021".     "evoucher_number":"75839380039548",     "status":"success"     "response_message":"evoucher issued" }</pre>	



# **Country Inputs: Angola**







#### **Country Inputs: Angola**



Izabela Leao Senior Rural Development Specialist Agriculture & Food Global Practice World Bank Washington DC



Emma Monsalve Social Protection Specialist World Bank Angola



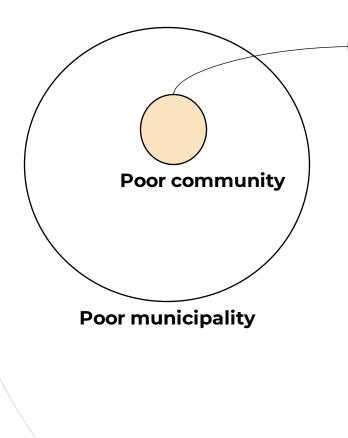
# **Country Context**

- **Growth:** Angola is the third largest economy in Africa and first largest oil producer. Economic growth in Angola has accelerated since 2021, thanks to high oil prices and increasing dynamism in non-oil sectors.
- Agriculture: the fifth largest sector in Angola, provides 46% of the country's employment, and contributed an estimated 8.5% to GDP in 2021. The agriculture and fisheries sector provides the main source of income to 90% of the 10.7 million Angolans living in rural areas. About 33% of agricultural households are headed by women, who are responsible for 70% of traditional subsistence agriculture and 24% of commercial agriculture.
- **Poverty:** Poverty rate (at \$2.15 per day) is 32.7%. The number of people living in poverty has continued to grow annually and is expected to exceed 11.7 million people in 2023.
- **Human capital:** The 2020 Angola Human Capital Index (HCI) stands at 0.36, the same level as in 2017. This is below the average for SSA Countries, which is 0.40.





## About Kwenda\* Registry (Integrated Social Protection Information System)





- Identification (biodata, biometrics);
- GPS coordinates
- Housing conditions, access to services, names and demographic details on all household members
- Types of vulnerabilities (chronic illness, etc.)
- Literacy/ education
- Livelihoods and employment

Registry (Sistema de Informação Integrado de Protecção Social, SIIPs)

- Managed by FAS-IDL in Ministry of Territorial Administration
- Coverage: 1 million rural households
- Linked to integrated social action program database (SIGAS) in the Ministry of Social Action, Family and Empowerment of Women (MASFAMU)



<u>\*Kwenda (IBRD US\$320 million and US\$100 million from GoA:</u> provides cash transfers to poor and vulnerable households while establishing the key building blocks of a comprehensive social assistance program.

## <u>About Angola's National Producers' Registry System</u> (Registro Nacional do Produtor Agropecuário – RNPA)

(to be established under the Angola Smallholder Agricultural Transformation Project\* in 2023)





- Identification (biodata, biometrics);
- Assignment of a NFC Producer Card with unique ID;
- Housing and Farm GPS coordinates;
- Farming activities;
- Link with SEGI;
- Link with RNIA;
- Exchange with other GoA databases (including other WB-projects).

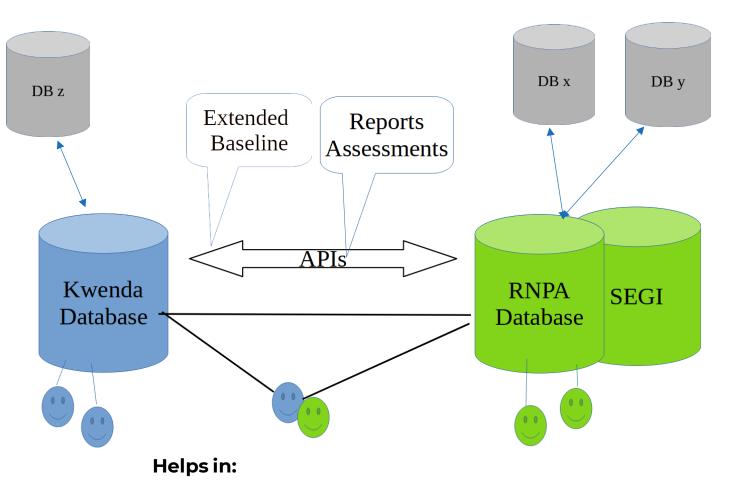


A informação não deve expôr o titular a discriminação, perfil ou exclusão social.



<u>\*Angola Smallholder Agricultural Transformation Project (IBRD US\$300 million</u>: aims at increasing agricultural productivity and at promoting climate resilience for smallholder farmers.

### **Interoperability with the SP systems**



# targeting beneficiaries;
# reducing identity frauds;
# increasing impacts;
# providing enhanced baselines;
# creating bridges between DBs.

Linking IDs					
Database Relational Table					
Kwenda	RNPA	Nat. ID			
1834343	64334543	6HG684			
7643738	84836222				
8473636	66842531	7JR8732			
3273828	65463829	8U3994E			

Puts in relation the various databases and compensates the absence of national ID though does not replace it.



## **Country Inputs: India**







#### Government of Karnataka, India



Annapurna K. Programme Director Kutumba



Shakeel Ahmed Project Director FRUITS



## **Country Context**

- India is a Agriculture predominant country
  - ≈ 60% of working population is engaged in Agriculture sector
- Farmers are engaged in multifarious activities like
  - Agriculture
  - Horticulture
  - Sericulture (silk rearing)
  - Animal Husbandry and fisheries
- In the federated system, Agriculture is state subject
- Both Union Government and state government implement several programmes to promote agriculture and support farmers.
  - Have established specialised department
  - Farmers need to visit each department to get the benefits & services Digital

Convergence

• A unified IT system helps both government and the farmers

## FRUITS – Farmer Registry

# **FRUITS** (Farmer Registration and Unified beneficiary InformaTion System)

Registration based on Aadhaar

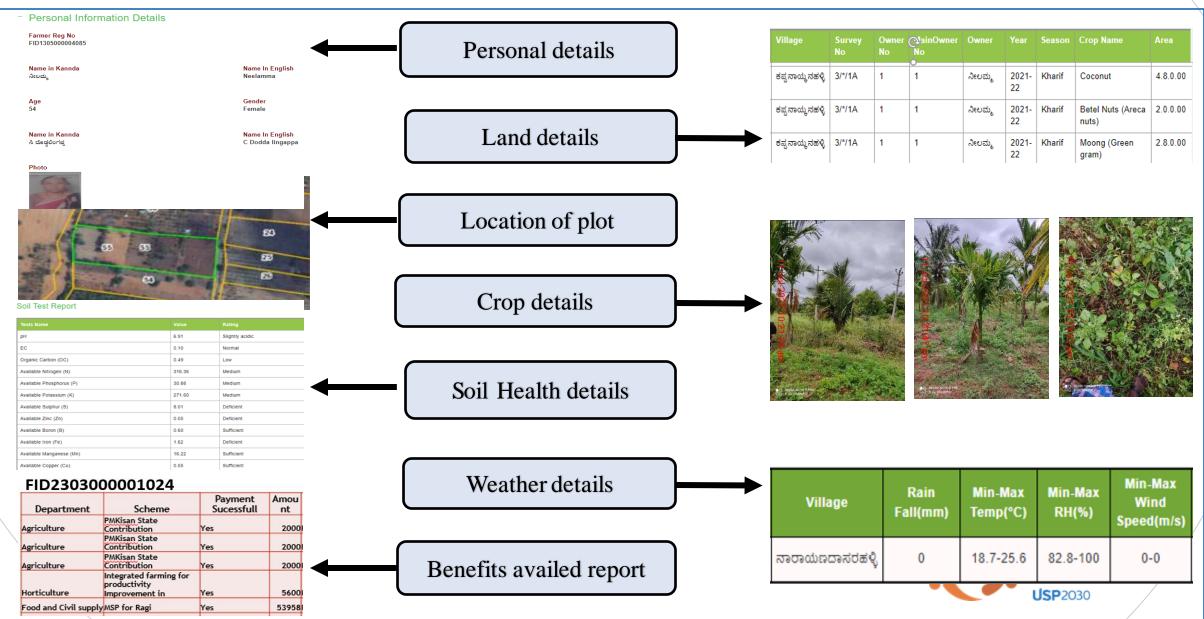
Unique Farmer ID (FID) for each Farmer

All attributes of farmer attached to FID

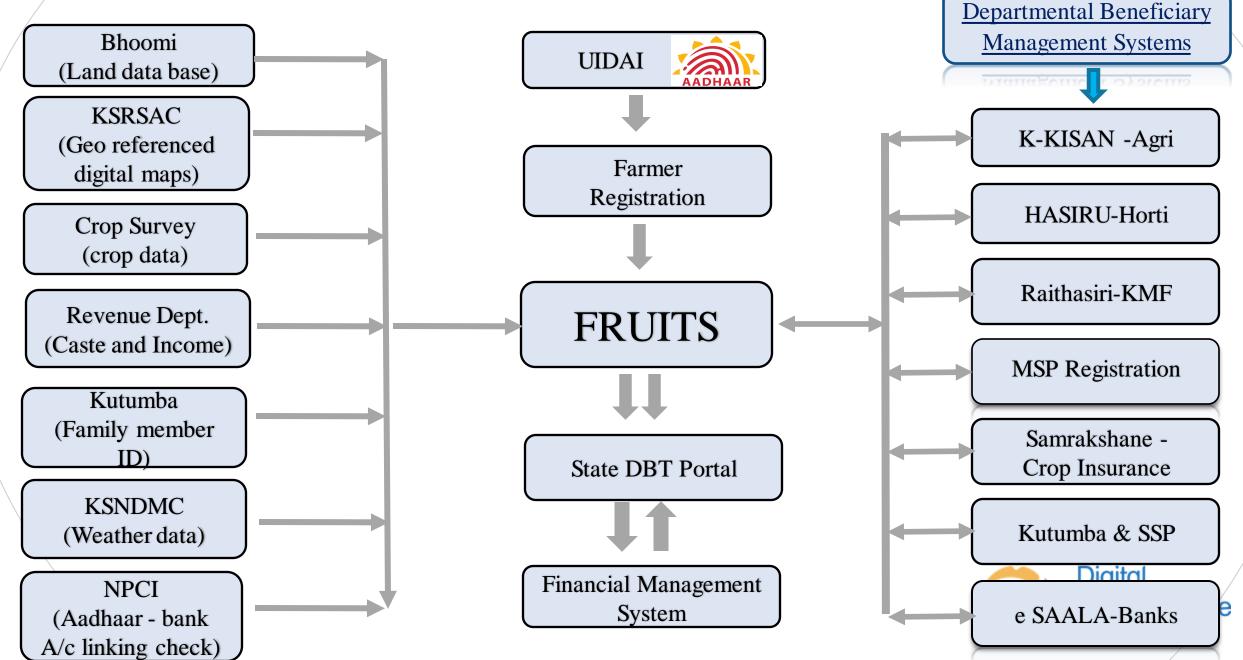
Land Owning and Landless Farmers



## FRUITS – What it contains?



## FRUITS - Framework



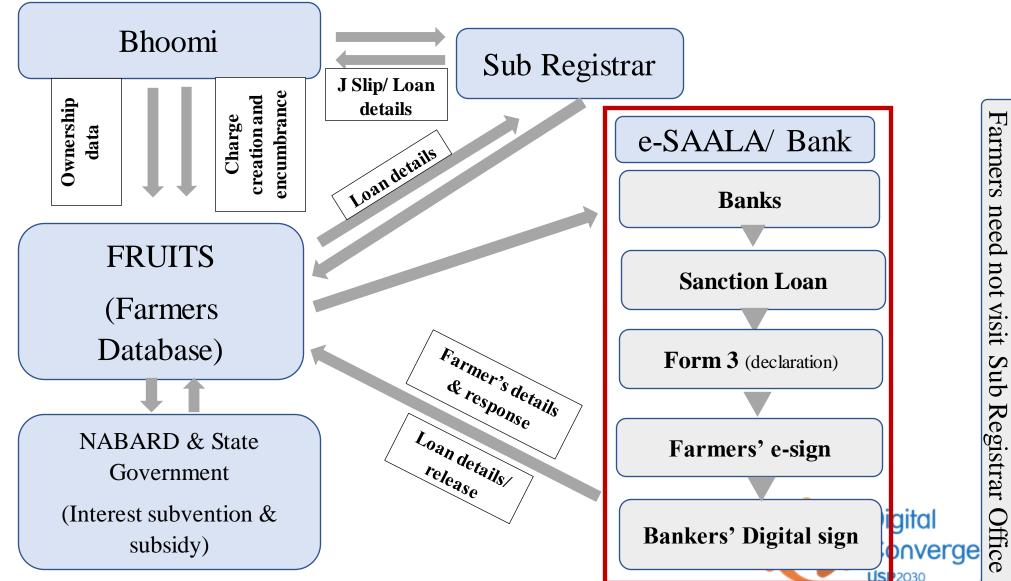
Use Cases -

- Requirement of budget arrived at in hours.
- List of farmers generated in FRUITS based on Crop Survey data
- List made available to concerned departments' IT applications.
- Payment based on Aadhaar DBT
- > 11 Lakh beneficiaries ₹555crores

Entitlement based assistance Co	ovid related re	elief –	G	rowers Lis	st
	7	Flower Growing Fa	armer List		
<ul> <li>Farmers affected due to Covid-19 related lockdown - Selected crops</li> </ul>	3 FID200500000140 Girjamn	HAMAPPA SC na Other	Rose (Guiab) 5 Rose (Guiab)	Coljection Status No No No No No	Process Process Process Process
<ul> <li>No application or documents sought.</li> </ul>	4 FID200500000149 Girjann 5 FID200500000381 MISRA Personal Details Farmer ID:			No No	Process
<ul> <li>Requirement of budget arrived at in hours.</li> </ul>	FID200600004859 Father Name: CHIKKAMUNI SHAMAPPA Caste:	department	ssing in al applica <sup>.</sup> SIRU)	tion	ANIL KUMAR Father Name In I ಚಿಕ್ರಮು-ನಿರ್ಣಮವ್ಯ Specially Abled:
<ul> <li>List of farmers generated in FRUITS based on Crop Survey data</li> </ul>	RTC Owner Data		,	$\mathcal{V}$	No Mobile Number: 8663367121
<ul> <li>List made available to concerned departments' IT applications.</li> </ul>	Scheme Details	t Hobi Vilage		Owner ಸಿ. ಅನೇಶ್ ಕುಮಾರ್ .	Crop Crop Surve
<ul> <li>Payment based on Aadhaar - DBT</li> </ul>	Scheme Comprehensive Hortiouiture Develop Component	District	Taluk	Crop Deta	ils
<ul> <li>&gt; 11 Lakh beneficiaries – ₹ 555 crores</li> </ul>	Assistance Amount: Rs. 2562.00 Reject Reason	ಚೆಂಗಳೂರು ನಗ	a don		
	Crop Details of each	Plot	A 14 33		

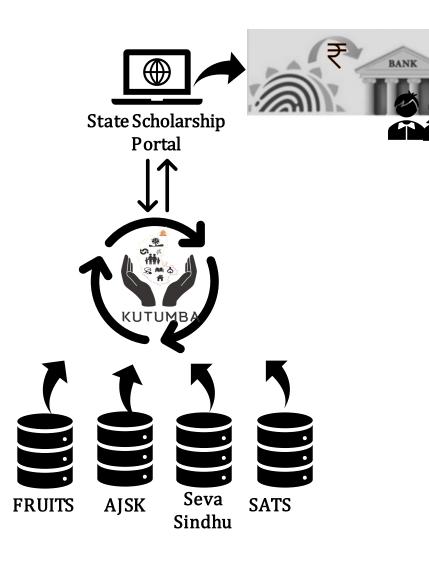
Flower

## Agriculture Credit – Using FRUITS



need not visit Sub Registrar Office

## Scholarship Programs using Kutumba and FRUITS



#### Vidya Nidhi

Educational Assistance to children belonging to families engaged in Agriculture & Allied Activities

- 1. Raita Vidya Nidhi children belonging to farming families
- 2. Scholarship to children of agricultural labourers
- 3. Scholarship to children of families engaged in fishing.
- 4. Scholarship to children of families engaged in livestock/dairying

1+ million students benefitted till date Digital Convergence

# **Country Inputs: Kenya**









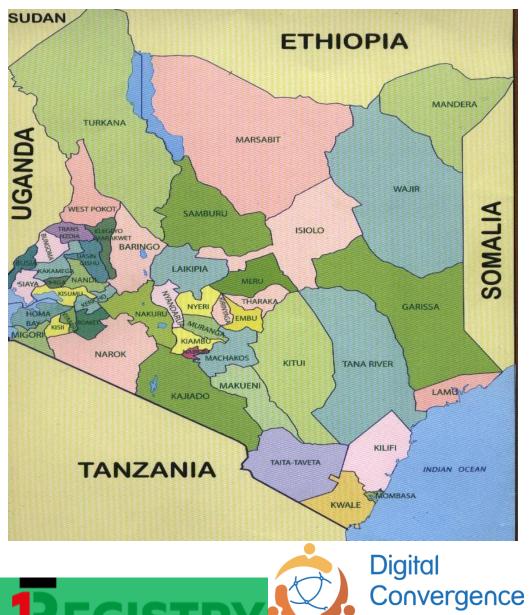
#### **Stefanie Bitengo**

#### Programme Coordinator National Social Protection Secretariat of Kenya



## **Country Context - Kenya's Enhanced Single Registry (ESR)**

- Size in Kilometres<sup>2</sup>- 580,367
- Population: 47,564,296 (Male 23,548,05, Female 24,014,716 & Intersex 1,524 )
- National Poverty rate: 36.6% (KIHBS, 2015/16)
  - ✓ Urban poverty rate: 29.4%
  - ✓ Rural Poverty rate: 40.1%
  - ✓ Extremely poor: 8.6%
  - ✓ National food poverty level: 32% (14.5m)
- Ginni coefficient: 0.445 from (0.485 in 2005)



eSolution for social accountability

**USP**2030



## **About The ESR**

## What?

- A socio-economic database of vulnerable households in Kenya

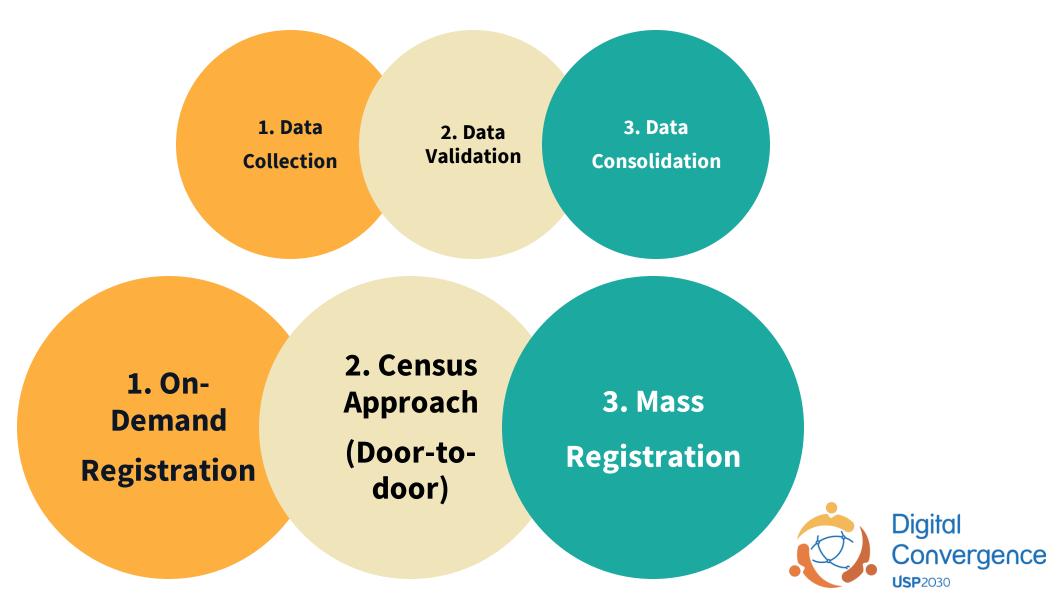
## Why the ESR?

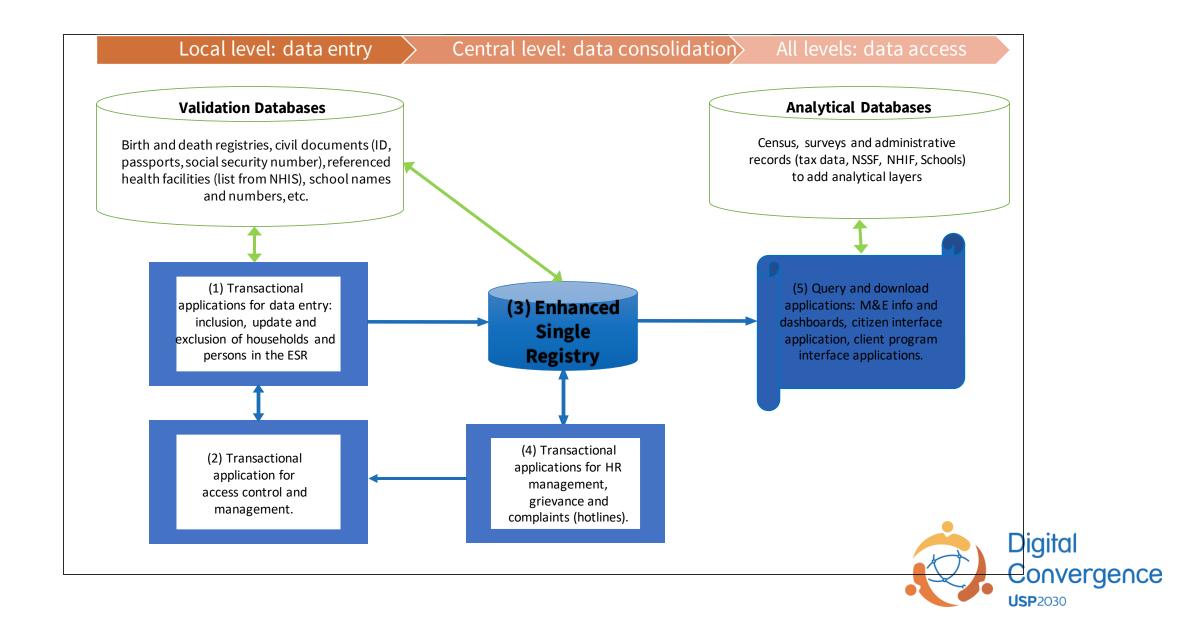
- Help develop policies and programs to harmonize and broaden social protection coverage

- Enhance SP relevance & responsiveness to pro-poor & shock responsive programing

- Promote inclusion of vulnerable & marginalized populations along the lifecycle

## **Steps to Populate the ESR**



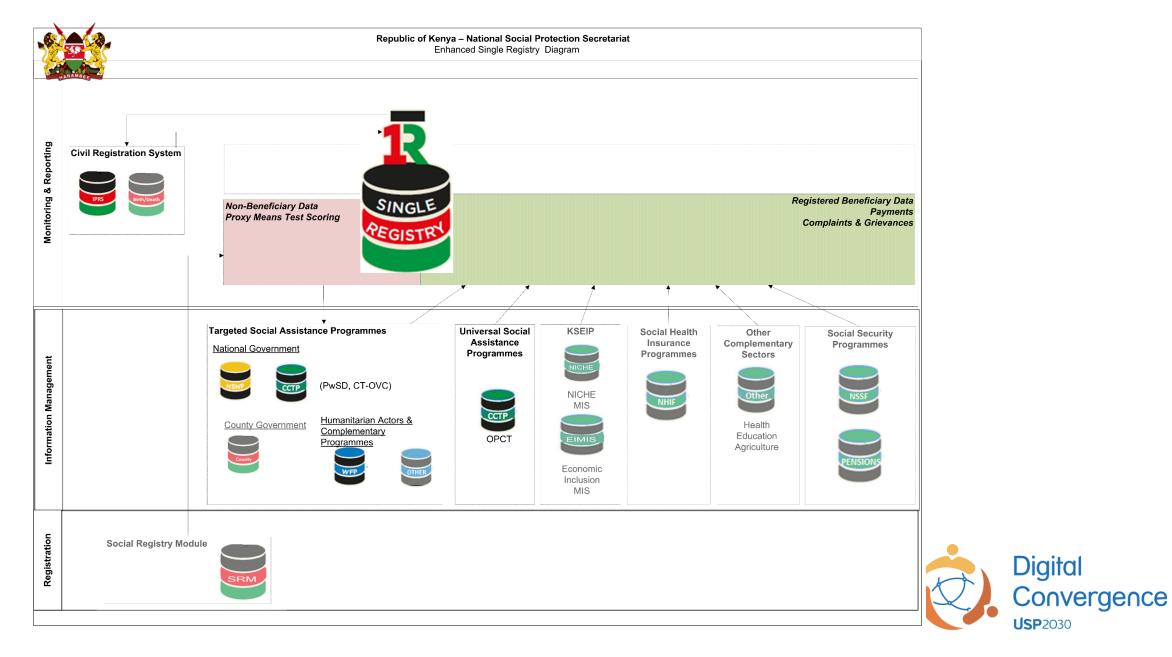


## Interoperability with Farmer Registry - Potential in the ESR

- Contains rich and updated data on actual and potential beneficiaries (IBR& SR) (Uses a Harmonized data collection tool - the HTT)
- Promotes data sharing & complementarity with client programmes
- Supports data validation and protection while enabling updates through linkages with other data bases (currently linked to IPRS and NHIF MIS)
- Promotes robust monitoring& reporting in SP sector



## **Enhanced SR Diagram**



# **Country Inputs: Lebanon**





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#### Dany Lichaa El Khoury Project Manager FAO

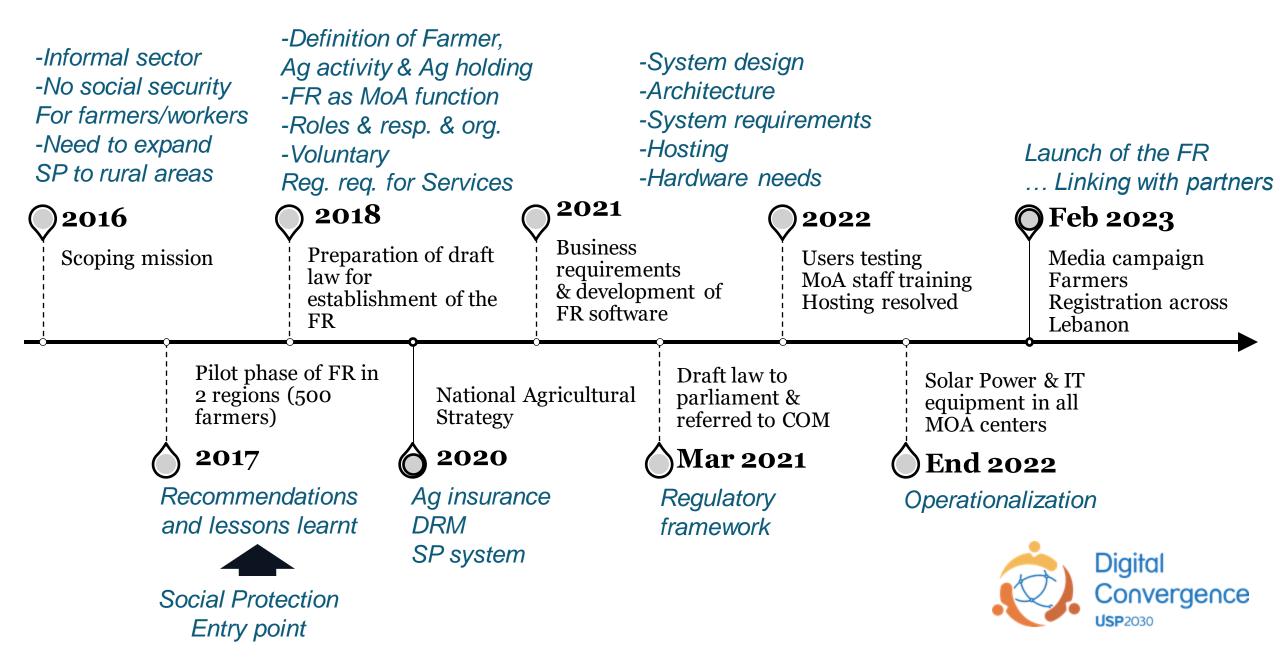


#### Why Farmers' Registry in Lebanon?

- Building block in the formalization of the sector: Farming as a profession
- Reliable source of information
- Easy tool to record, control and update data
- Agriculture policies
- Agricultural sector management
- Expand Social Protection coverage of farmers
- Transparent and fair distribution of support / subsidies
- Shock and emergency response tool
- Social safety nets and insurance
- Etc.

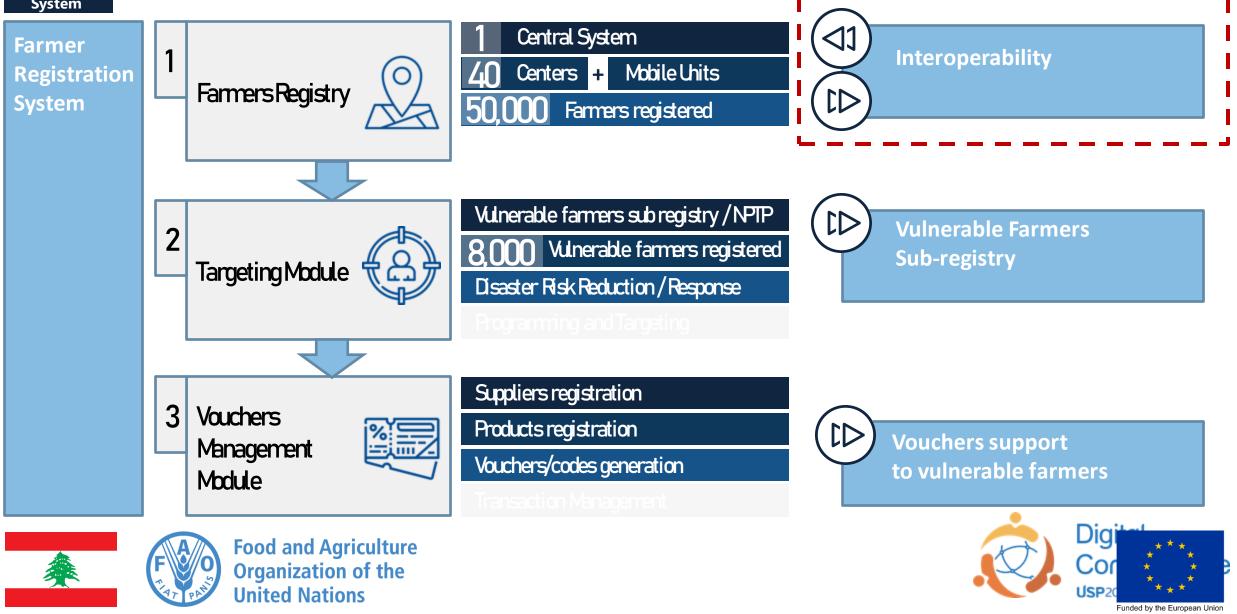


### **Farmers Registry Establishment Journey**





ADEQUATE AGRICULTURE PRODUCTION SUPPORT SYSTEMS FOR VULNERABLE FARM COMMUNITIES ROLLED OUT AND GOOD AGRICULTURE PRACTICES SUPPORTED AND DEVELOPED



Go To Location		Name*
Governorate Caza		Block Numbe
Village		Description
Longitude		Land Cover C
Go Select Section		Select
+	Haeven El Dohab Caste Units	Is Irrigated
Parcels*		Total Parcel A
البلدات 🕑	Tel Sollyeb	200
الأقضية 🕑		Remaing Area
المحافظات 🔽		200
Google Satellite & Roads		
Google Maps - Stree		Personal Information

Number of children not attending school\*

☑ Google Maps - Stree	Farmer Informaion	Livelihood		
	Address			
	Optional Contacts	undefined		
	Family Information	Ownership of bank account *	Number of rooms excluding kitchen and toilet *	
	Loan			
	Livelihood	Yes	· 7	0
	Farm	Access to electricity	Legal ownership of the dwelling where they live*	
	Animal	Both	✓ Yes	*
	Animals	Ownership of household vehicle*	Total number of members in the household*	
	PoulTry			
	Bees	Yes	* 4	•
	Fish	Total number of children (<14) *	Total number of elderly household members (>65)*	
	Parcel	2	© )	0

Fomale-headed household?

الجمهورية اللبنانية وزارة الزراعة
المربية فرجع
اسم المستخدم اسم المستخدم
<b>كلمة المرور</b> كلمة المرور

#### 🔒 اعادة تعيين كلمة مرور

تسجيل الدخول

Personal Information			
FirstNome*	Middle Name*	Last Name*	
على	3630	مالح	
Mother First Name*	Mother Last Name*		
۵~			
First Name in English	Middle Name in English	Last Name in English	h
RI .	Nohammad	Saleh	
Mother First Name in English			
Notier Frst Kame in English	Mother Last Name in English		
Kamia	Mother Last Name in English		
_			
Kamia.		Record Number	
Karnia Extra Information	Said	Record Number*	
Kamia Extra Information Identification Number	Said Email		
Kamia Extra Information Identification Number Doctor18	Saard Email Assairb@ids.com.b	1520325	
Kamia Extra Information Identification Number D000019 Phone Number*	Saari Embil a.sakh@kis.com.b Martial Status*	1520025 Gender*	

Farmer Information

Optional Contacts Family Information

Address

Loan

Livelhood

Animals PoulTry

Bees

Fish

### **Farmers Registry Business Requirements**

- Dashboard
- Farmer pre-registration
- Basic farmer data
  - personal details
  - contact information...
- Farm data registration
  - farm assets
  - Workers...
- Land & parcel identification (GIS)
- Farmers' livelihood data
  - Household
  - Socio-economic...
- Farmers targeting / sub-registry
- Voucher scheme management

## Functionalities

- Farmer registration certificate
- Farmer ID
- Data Import Export
- Powerful search engine
- Dynamic reporting tool
- Integration w/ existing MoA apps
- System administration
- Audit records / Log management
   / Security Strong authentication
- Online / offline / local registration

#### Targeting and R-MPI Rural Multi-dimensional Poverty Index

#### Defining relevant dimensions and indicators

Indicators are variables used to measure vulnerability; dimensions are categories used to group the indicators.

1."Core dimensions of vulnerability" such as level of education and living conditions.

2. vulnerability conditions in rural settings deprivation cutoffs for each

Thresholds indicating the minimum level reached in an indicator in order to be considered nondeprived in that particular indicator.

Thresholds are then used to construct binary deprivation scores (0=nondeprived, 1=deprived) for each indicator weight to each indicator Lebanon follows the standard practice of assigning equal weights to each dimension, in turn, each indicator is equally weighted within each dimension.

**Assigning** a

Producing a deprivation score This score is defined as the sum of the weighted deprivations suffered by the unit of identification.

Dimension	Indicator	Deprivations	Weight
Health	Health insurance	Deprived if no household member benefits from health insurance	1/8
	Disability	Deprived if any household member suffers from a severe disability	1/8
Education	Enrollment	Deprived if any child aged 14 and below is not enrolled in school	1/8
	Highest level of education attained	Deprived if household head has not completed secondary education	1/8
Living standards	Ownership of dwelling	Deprived if household does not own dwelling of residence	1/16
	Car ownership	Deprived if household does not own a car	1/16
	Access to backup electricity	Deprived if household does not have access to backup electricity	1/16
	Over-crowding	Deprived if there are more than 2 people per room (excl. kitchen WC)	1/16
Rural livelihoods	Dependency ratio	Deprived if there are more than 2 dependents for every household member of working age	1/24
and resources	Unemployment	Deprived if any household member aged 15 and above is unemployed	1/24
	Ownership of high-value mechanical equipment	Deprived if household does not own high-value mechanical equipment	1/24
	Access to road within X km	Deprived if household does not have access to road within X km	1/24
	Part of producer organization or economic group	Deprived if not part of producer organization or economic group	1/24
	Production capacity	Deprived if production capacity is less than X	1/24

## **Global Perspective: FAO**



Food and Agriculture Organization of the United Nations





### Marco Knowles

### Senior Social Protection Officer and Team Leader Food and Agriculture Organization of the UN



## Interoperable farmer and social registries, WHY?

### "In diversity there is beauty and there is strength." – Maya Angelou



### **Interoperable farmer and social registries at work**

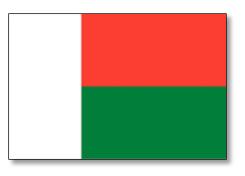




## **Open Discussion**



## Closing & Way Forward: with reflections from Madagascar







#### Mampionona Amboarasoa

Agriculture Economist Madagascar, World Bank



## Way Forward

Interoperability in Action : Workshops

- Interoperability of SP systems with Disability Registry
- Interoperability of SP systems with Social Registry

Standards Formulation Committees

Standards for Process, Data and APIs :

- SP-MIS and CRVS interoperability
- SP-MIS and Payment
   interoperability
- SP-MIS and National ID interoperability
- SP-MIS and Farmer Registry

## More Interoperability interfaces

SP-MIS with Integrated
 Beneficiary Registry



## Support the Initiative

- Support the process of consensus building and harmonization of standards.
- Spread awareness about the initiative
- **Promote** adoption of **standards and other outputs**
- Adopt the standards and other outputs in your SP projects and share feedback

#### Participate in working groups

Group 1 : Payment layer interoperability Group 2 : CRVS layer interoperability Group 3 : Identification layer interoperability

#### Levels of participation

Level 1: Share existing materials Level 2: Review outputs Level 3: Join group discussions and validation workshops Level 4: Drafting standards and guidelines alongside facilitators



## **Connect with Convergence Initiative**



www.spdci.org

socialprotection-convergence.discourse.group

social-protection-convergence-initiative

<u>@sp\_dci</u>



@sp convergence

