

Supporting Transparent Land Governance in Ukraine

Steering Committee Meeting, Feb. 1, 2023



THE WORLD BANK
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Land 
Transparency

Supporting Transparent Land
Governance in Ukraine



Overall objective and implementation modalities

Objective: Create preconditions for transparent functioning of land markets to ...

- ...enhance efficiency and sustainability of resource use
- ...provide a basis for rural investment and growth by small and medium farms & rural SMEs
- ...counter rural depopulation and impoverishment by catalyzing private investment & diversification

Supported by EU (2nd phase) implemented in close collaboration with

- Ukrainian institutions (MAPF, SGC, MoJ, NAIS, MoEDT, FLA, MDT, MInfra, Ukrstats)
- EU-supported projects (IPRSA, U-LEAD, PRAVO) and other partners

Modalities of implementation

- Technical assistance only, no Hardware (extra EU procurement); no Government work
- Studies, Monitoring Piloting and Impact evaluation of new approaches

Link to WB support

- EU supported TF for Partial Credit Guarantee (PCG) facility; P4R restructuring
- Potential scaling up of farmer support programs
- Land markets & local planning important for reconstruction

Agreed goals

- Legal basis for land market established & implemented with progress monitored
- Agrarian registry (AR) used for State Support (SS), leverages banks, e-hub for farmers
- SGC reformed towards a service organization implemented
- Land registration & transfer simplified, holes for raiders blocked, role for private sector
- Cadaster & registry fully interoperable & reasonably complete
- Local Gov'ts have capacity & data to develop & enforce plans; ↑ land revenue by 25%
- Landowners aware of legal framework & incidence of land disputes monitored
- Procedures to monitor land governance established & operational

Land laws adopted in 2020/1 w. WB/EU/US support

Anti-raider law (340)

Land turnover law (552)

Local Planning (711 – DL 2280) – need to maintain against challenges

NSDI (554 – DL 2370)

State support (985 – DL 3295)

State Geocadaster (SGC) Reform (1423 – DL 2194)

Mandatory e-auction of public land (1444 – DL 2195)

Partial Credit Guarantee (PCG) Facility (3205 – DL 1865)

Progress w. CMU resolutions (status Jan 26, 2023)

Law	Total # needed	Adopted	Draft public	Drafting Started	Not started	Responsible
1.Anti-raider (340)	5	5	0	0	0	MoJ; MAPF
2. Turnover law (552)	4	4	0	0	0	MinEco, MoJ
3. Planning (711/2280)	10	9	1	0	0	MinInfra, MinEco,
4.NSDI (554/2370)	3	3	0	0	0	MinEco, MAPF
5. S support (985/3295)	6	5	0	1	0	MinEco (5)
6. SGC ref (1423/2194)	23	7	4	0	12	ME, MAPF, Mincult
7. e-auct.(1444/2195)	1	1	0	0	0	MinEco
8. PCG (3205-2/1865)	9	7	0	2	0	CMU, NBU
All 8 laws	61	41	5	2	12	

Progress June-December 2022

1. Supported establishment of State Agrarian Registry (SAR) & disbursement of \$50 mn PSG funds
2. Monitored SAR implementation as a basis for more in-depth impact evaluation
3. Identified banks' needs to use SAR for rural credit & PCG; fed into regulation amendments
4. Launched small farm survey & analyzed initial results to assess impact of war on Ukrainian agric.
5. Conducted assessment of SGC/DZK HW/SW as basis for institutional transformation
6. Initiated dialogue with NACP on implementation plan for land chapter of Anti-Corruption law
7. Supported establishment of legal & regulatory basis for land relations monitoring
8. Used imagery to identify damage field; combined w. crop maps to assess war impact on area cultiv.
9. Disseminated analysis of impact of e-auctions on local land lease revenue
10. Supported MAPF communication and outreach

SAR established; used PSG to pilot payment

Activities

- Supported passage of regulations to operationalize SAR & pilot EU-supported PSG
- With MAPF and IPRSA supported software development & deployment; server; training FSF
- Helped MAPF set up call center (incl. FLA hotline for legal support)
- Helped prepare/disseminate materials for SAR and PSG users & general public
- Supported nation-wide SAR launch (August) and PSG (September-November)
- Built capacity in MAPF on reporting and using daily monitoring data

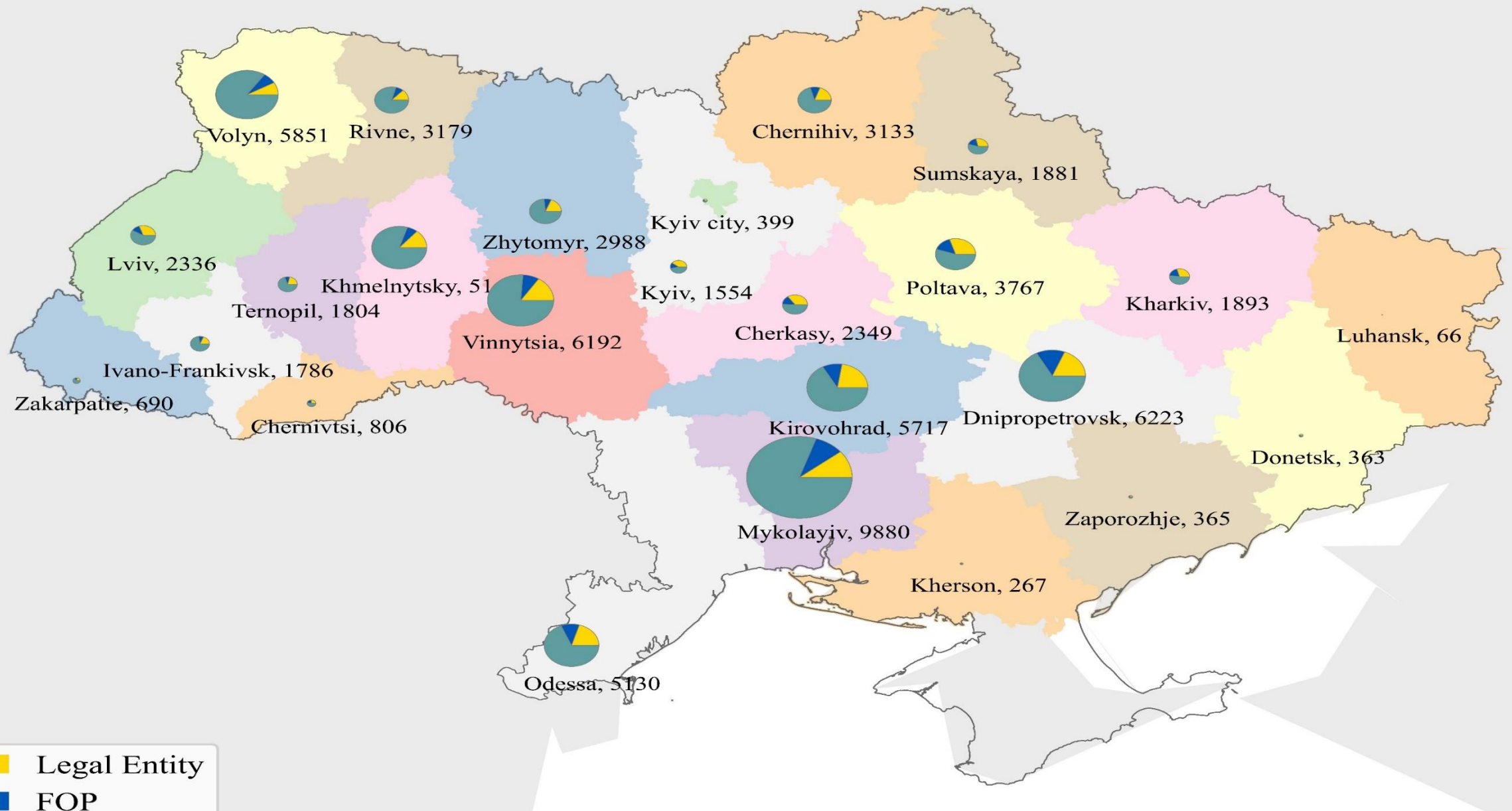
Results

- More than 80,000 SAR sign-ups; 50 mn € to > 33,000 producers (plus pipeline of > 33,000 for 34 mn)
- Use of SAR by other donors/FAO to distribute farmer support
- Action plan for SW updates & regulatory changes building on pilot lessons agreed w. MAPF & EU

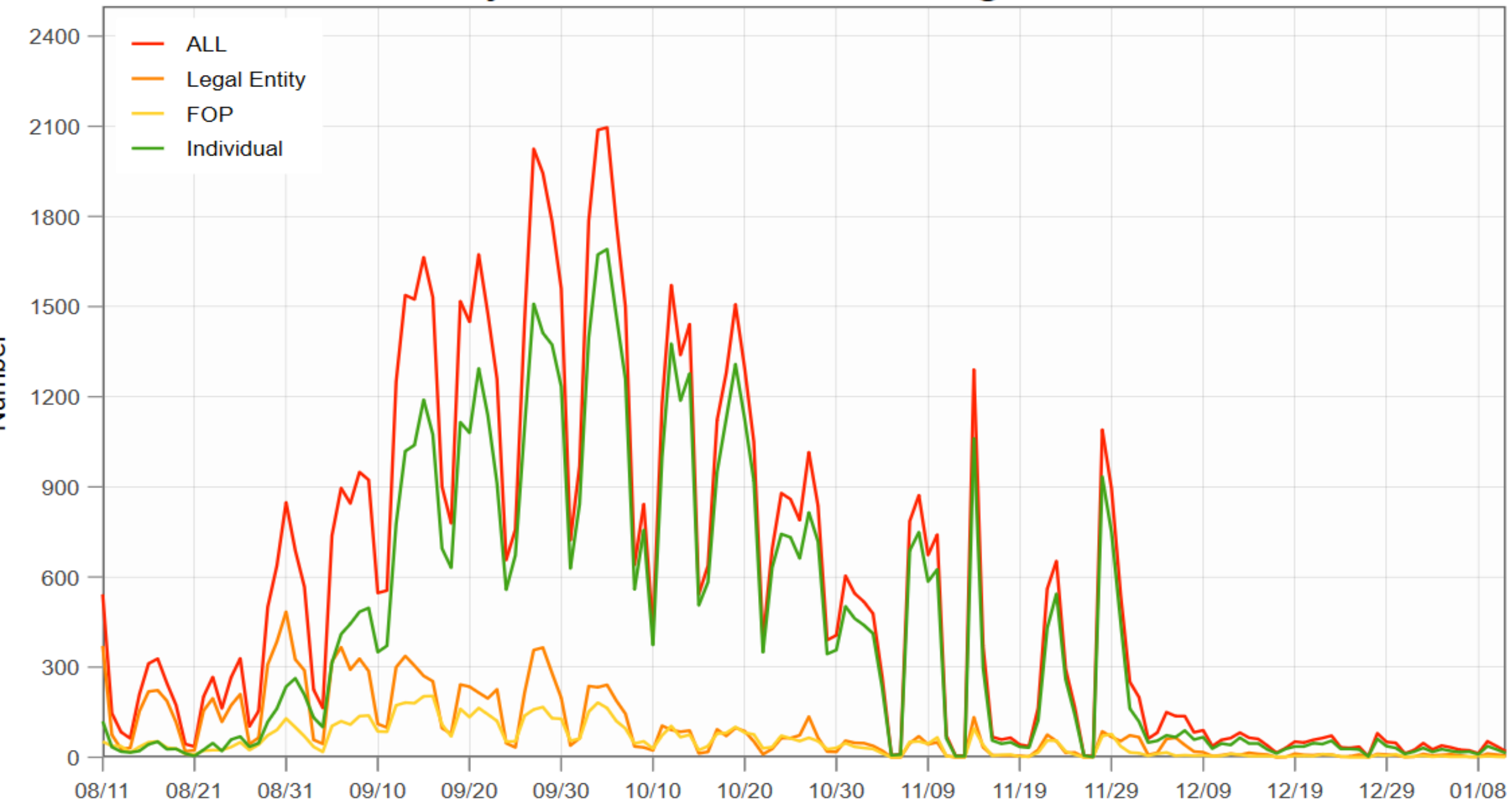
Next steps

- Institutionalize SAR by ensuring its use for all types of state support & PCG
- Support use of SAR as digital marketplace for farmers to improve rural factor market functioning

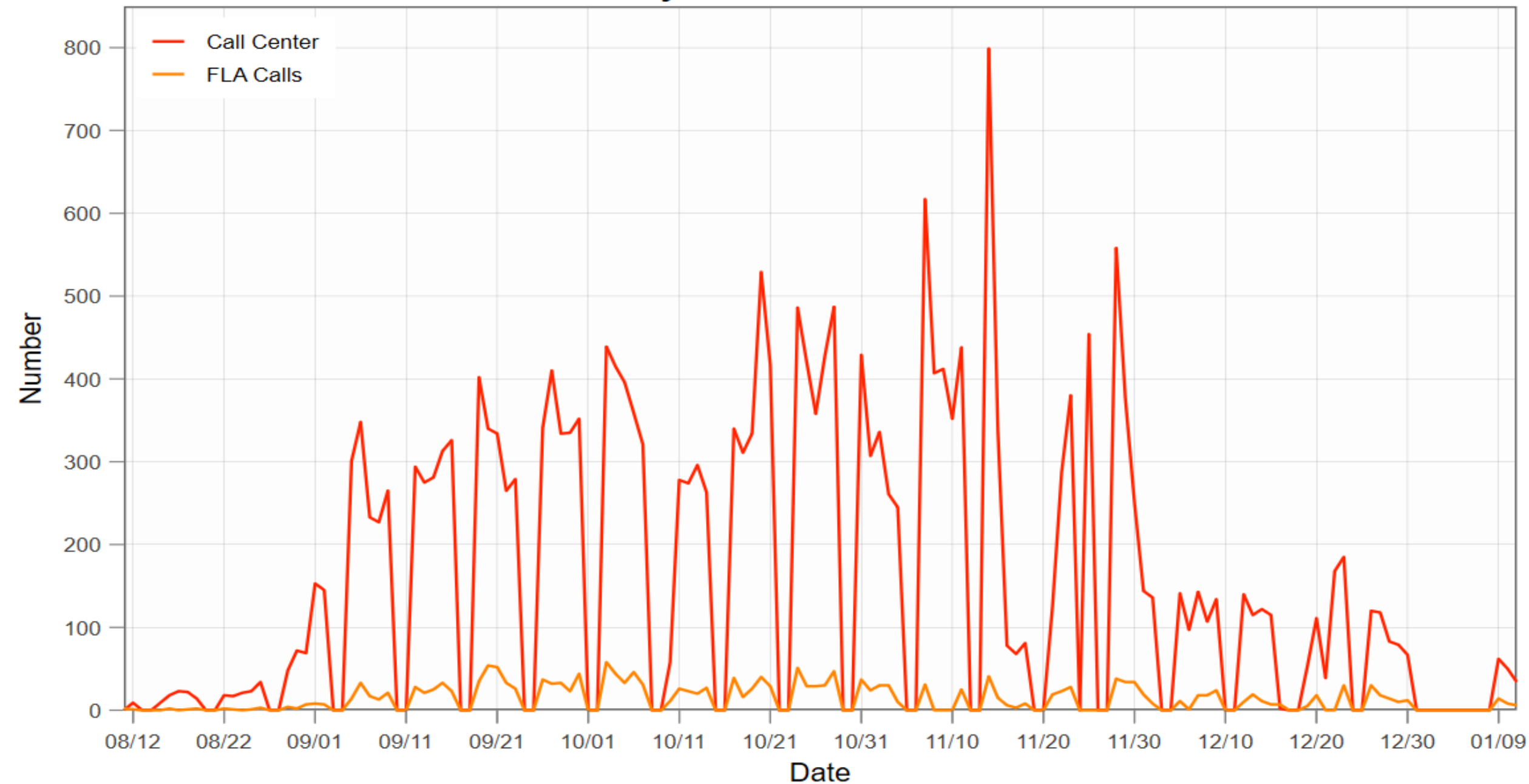
Total number of SAR registrations by farm type



Daily Number of SAR Registrations



Daily Number of Calls



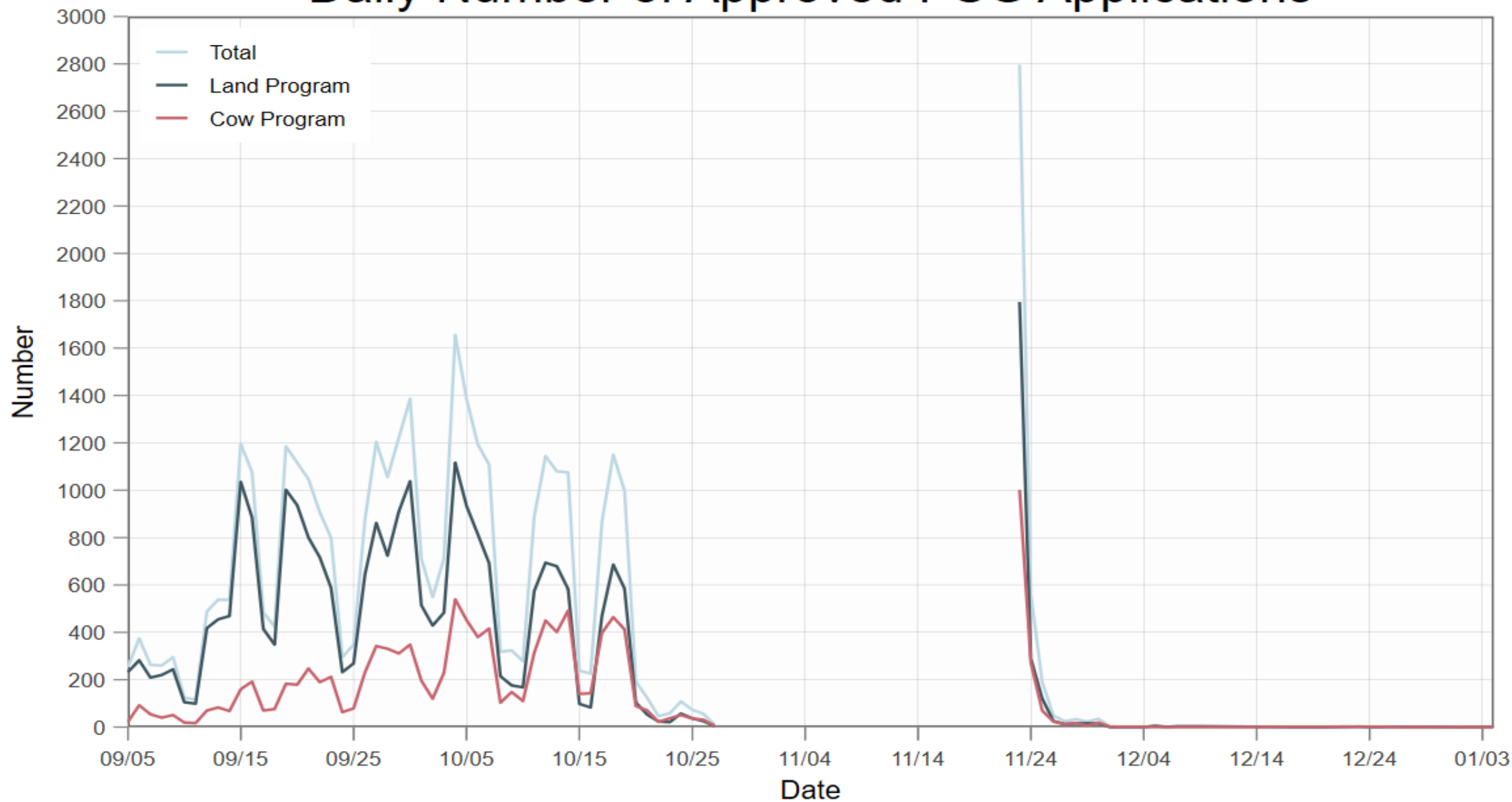
No. of approved PSG applications

Region	Total	Amount (US\$mn.)	By type		
			L.Ent	FOP	Ind.
Central	15,805	27.112	2,593	1,639	11,573
East	12	0.023	2	4	6
North	2,994	5.624	606	486	1,902
South	6,739	8.457	561	590	5,588
West	7,995	8.963	1,157	634	6,204
Total	33,545	50.178	4,919	3,353	25,273
Eligible pipeline	33,818	34.00			

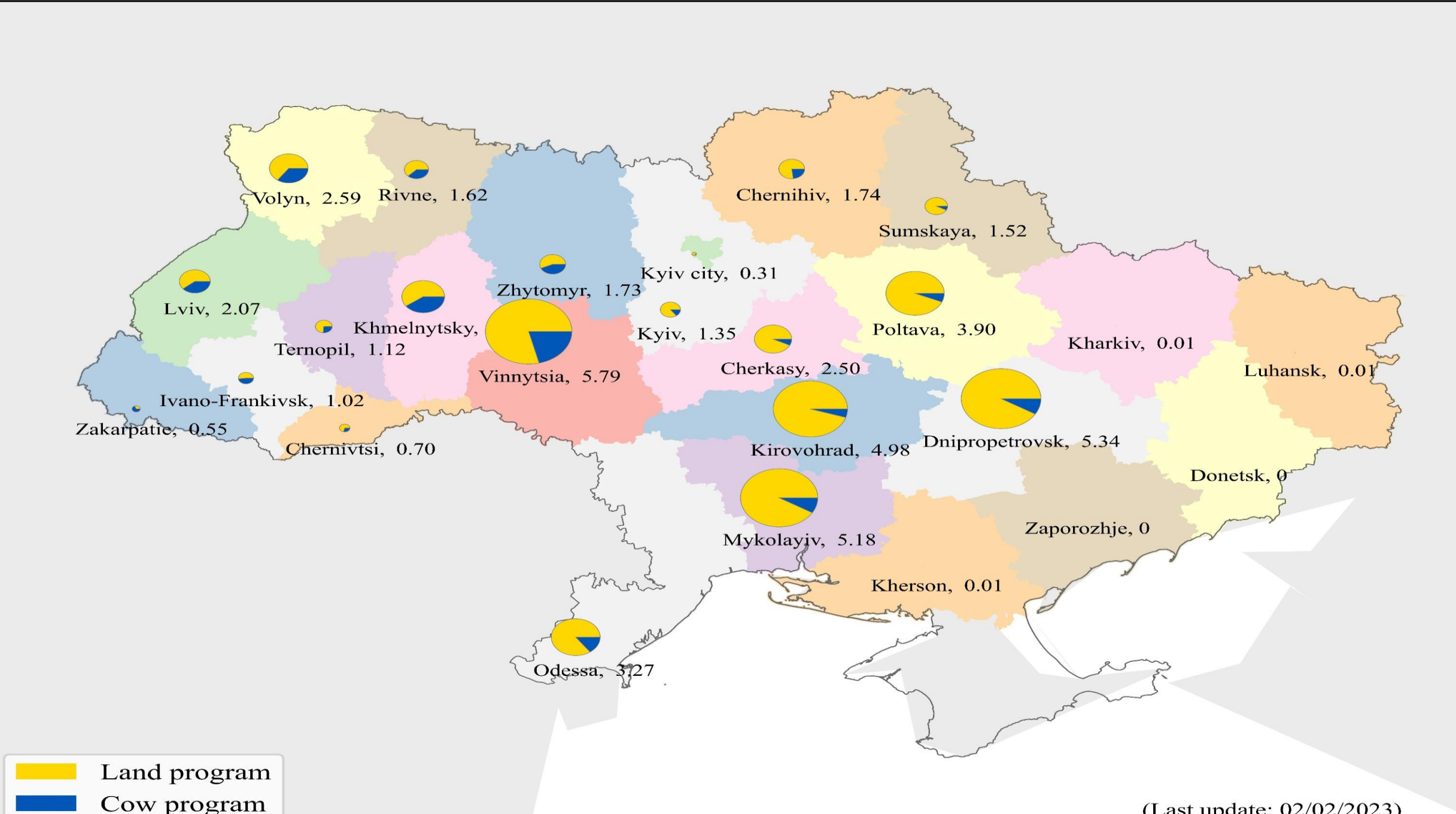
Approved PSG applications by program/farm size

Region	Land program (ha)				Cow program (# cows)			
	Total	0-50	50-100	>100	Total	0-20	20-50	>50
Central	10,356	8,378	1,537	441	5,449	5,239	119	91
East	12	10	2	0	-	-	-	-
North	2,147	1,712	329	106	847	779	24	44
South	5,672	5,158	396	118	1,067	987	49	31
West	4,695	4,248	352	95	3,300	2,967	175	158
Total	22,882	19,506	2,616	760	10,663	9,972	367	324

Daily Number of Approved PSG Applications



PSG disbursements (US\$ mn.) by region & sub-program



SAR automation & monitoring; impact evaluation

Activities

- Piloted methodology to check parcel cultivation status (w. JRC)
- Daily reporting and data analysis for SAR; creation of server for short feedback requests
- Developed methodology to evaluate PSG impact using satellite imagery (complementing survey)

Results

- Demonstrated viability of checking farmer eligibility based on parcel level cultivation status via RS
- Showed viability of evaluation methodology using remote sensing - can be used for any gov't or donor-supported program implemented using SAR

Next steps

- Automate check of cultivation status using vector data (e.g. WFS) to be in line with EU best practice
- Get farmer feedback on 'yellow' cases to improve small crop identification based on machine learning
- Discuss with Ukrstats on improving timeliness & resolution of national crop statistics using RS
- Explore making current & historical cultivation status available to banks/insurance providers

Scoped options for banks' routine SAR use

Activities

- Meetings with banks on requirements to use SAR for expanding access to finance
- Meetings with PCG team & MAPF on how to use SAR as basis for PCG
- Supported establishment of WG with MoJ to discuss registry data access

Results

- Identified & agreed w. MAPF amendments needed to allow bank access to fiscal/statistical records
- Drafting of amendments initiated
- Technical specifications for software (incl. APIs) developed & tendered
- Amendments to make SAR mandatory for state support drafted

Next steps

- Agree with MAPF on most expeditious way to quickly pass amendments
- Establish APIs to fiscal service & statistics, train banks & implement/evaluate pilot
- Re-engage with MoJ on options to expeditiously register unregistered parcels

Small & medium farm survey

Activities

- Developed sample stratified by size & PSG participation status using SAR as frame
- Developed questionnaire & administered via phone; target 2,500 farms

Results

- Data for 2,200 farms collected (Oct 22-Jan 23); initial analysis ongoing
- Significant war-induced reductions in profitability due to lower output prices & higher cost of inputs
- Social support held up & actually increased in wartime
- Credit and working capital constraints severe; key area for potential gov't support
- High demand for land purchase/lease if conditions return to normal shows positive long-term outlook

Next steps

- Conduct satisfaction poll on FLA requests & sign-up/PSG procedures; regional input prices
- Implement follow-up survey in spring 2023 to assess spring crop/PSG effect/scope for diversification
- Feed into damage assessment update & analyze productivity effects based on regional input prices

Preliminary evidence from farm survey: Welfare

Farm survey

- 2,500 farms; national coverage; phone
- SAR as a frame
- Size strata: <50; 50-120; 120-500; >500 ha
- Statistics preliminary
- Non-response an issue

Dramatic drop in perspectives...

- Close to 4 points in ladder
- From bad to worse in E followed by C
- Similar drop personal; more optimistic
- W now offers best perspective (from worst)

... but country continued to function

- Social assistance coverage ↑ 31% to 38%
- Received by 43% of farms < 50 ha
- Non-ag. income ↓ 10% only (30% in E)
- Informal networks accessible for many

War damage to land/structures

- Concentrated in E & N
- In line with data from imagery

	Total	Centr	East	North	South	West
Ladder ctry 21 (1-10)	7.13	7.31	6.93	6.89	7.12	6.81
Ladder ctry now (1-10)	3.20	3.23	2.59	3.03	3.29	3.38
Ladder pers. 21 (1-10)	7.21	7.34	6.91	7.30	7.13	6.85
Ladder pers. now (1-10)	3.65	3.69	3.19	3.33	3.76	3.88
Got soc. assistance 21	0.31	0.29	0.26	0.34	0.34	0.30
If yes, US\$/pc	326	339	281	307	340	286
Got soc. assistance 22	0.38	0.33	0.40	0.42	0.48	0.38
If yes, US\$/pc	309	332	262	291	305	288
Can get inf. support?	0.46	0.48	0.44	0.44	0.44	0.47
max. (US\$)	7,267	7,734	9,052	10,944	4,689	5,054
Non-ag inc. 21 (\$/pc)	2,230	2,387	2,406	2,326	1,922	2,015
Non-ag inc. 22 (\$/pc)	2,005	2,096	1,739	2,297	1,762	1,875
War damage land/struct.	0.07	0.03	0.24	0.21	0.07	0.00
No. obs.	945	437	46	139	212	111

Evidence from farm survey: Production

	Farm size group in ha				
	Total	< 50	50-120	120-500	> 500
Crop area 21 (ha)	172.43	19.41	74.21	199.22	913.32
Crop area 22 (ha)	151.90	19.65	75.36	195.65	828.11
Cereal area 21 (ha)	84.20	12.27	36.34	95.75	396.28
Cereal area 22 (ha)	73.47	12.28	36.56	91.85	322.18
C. yield 21 (t/ha)	3.90	3.21	3.99	4.16	4.50
C. yield 21 (t/ha)	3.17	2.65	3.26	3.26	3.80
Sold wheat in 2021	0.90	0.91	0.89	0.89	0.90
Sold wheat in 2021	0.43	0.32	0.45	0.47	0.56
Wheat price '21 (\$/t)	166.99	142.69	163.72	173.80	195.57
Wheat price '22 (\$/t)	127.06	113.93	123.90	124.44	154.72
Out. value 21 (\$/ha)	873.64	709.18	914.33	899.11	1069.62
Out. value 22 (\$/ha)	594.10	460.14	636.45	609.67	763.12

Crop area reduction modest

- 12% reduction in total/cereal area
- Zero for farms < 500 ha

Physical output down 20%

- Similar across farm sizes & crops
 - Reinforces pre-existing yield gaps across farm sizes
- Crop expansion/contraction & yield dynamics

Market access a key constraint

- Market partic. dropped almost 50%
- Size differentiated (59 vs. 34 points)
- Price drop by 20%
- Reinforces price differences across farm size groups

Raises interesting questions

- How do these translate into profit?
- What causes differential effects?
- Bottlenecks to better performance?

Evidence from farm survey: Perspectives

Land market

- Agricultural fundamentals strong
- Only 4% ready to sell land (well above market price)
- > 86% in > 50 ha want to buy land
- WTP in line with pre-war prices
- Strong demand for land to lease

Credit markets

- Zero long-term credit
- Access extremely size-biased
- Not surprising without land market
- *Ex-post* credit subsidy mechanism: Goes to large farms w. credit access
- Large unsatisfied credit demand
- Leveling playing field could help

Other issues

- Most important short-term concern is input access; TA on how to adjust
- Scope for equipment rental?

	Farm size group in ha				
	Total	< 50	50-120	120-500	> 500
Willing to sell land	0.04	0.07	0.03	0.03	0.00
Price WTS (\$/ha)	2,784	3,732	1,771	1,493	
Wants to buy land	0.76	0.53	0.86	0.82	0.92
Price WTP (\$/ha)	1,315	1,270	1,307	1,356	1,373
Lease paid (\$/ha)	80.90	35.50	99.89	100.85	115.10
Want to lease more?	0.82	0.69	0.90	0.84	0.93
Ever received credit	0.53	0.35	0.51	0.70	0.87
if y, year since last	3.69	5.54	3.94	3.09	1.93
size (US\$)	44,211	6,090	15,078	48,685	153,999
interest (%)	7.66	10.30	8.23	6.92	5.41
used for WC	0.90	0.77	0.90	0.94	0.99
Would want to borrow?	0.77	0.60	0.85	0.85	0.91
Would benefit from TA	0.88	0.89	0.91	0.88	0.91
Govt to reg. input price	0.70	0.74	0.69	0.67	0.62
Farm equipment (\$/ha)	494	478	648	647	347

DZK/SGC HW/SW assessment

Activities

- Restarted technical assessment of DZK/SGC hardware (HW), software (SW) and IT systems
- Identified key vulnerabilities & performance constraints
- Report analyzing software & security vulnerabilities to be completed shortly

Results

- Input into EU tender for critical hardware (€ 180K) to ensure system continuity
- Initial assessment of security issues & system vulnerabilities based on draft report

Next steps

- Elaborate roadmap for institutional reform to guide follow-up support & TA

Land in Anti-Corruption law implementation plan (ACLIP)

Background

- Anti-Corruption Policy (ACP) law (#2322-IX) adopted June 20, 2022
- Sections on land build on white paper elaborated by MAPF/KSE with project support earlier
- Provides legal backing for land strategy – CMU resolution on action plan overdue

Activities

- Input into discussion of draft ACLIP that was sent for CMU approval
- Dialogue with NACP: Collaboration to strengthen capacity on land
- Agreed to provide external monitoring to ACP implementation

Next steps

- Technical dialogue on monitoring framework (incl. intermediate milestones) once plan approved
- Public event with NACP to highlight importance of land in anti-corruption effort in March

Land relations/governance monitoring

Activities

- Land market monitoring mandated by law 1423; manual monitoring operational since July 2021
- Land market restarted in June 2022
- Provided input to in Law 2698 (DL 7636) to broaden monitoring beyond land market only

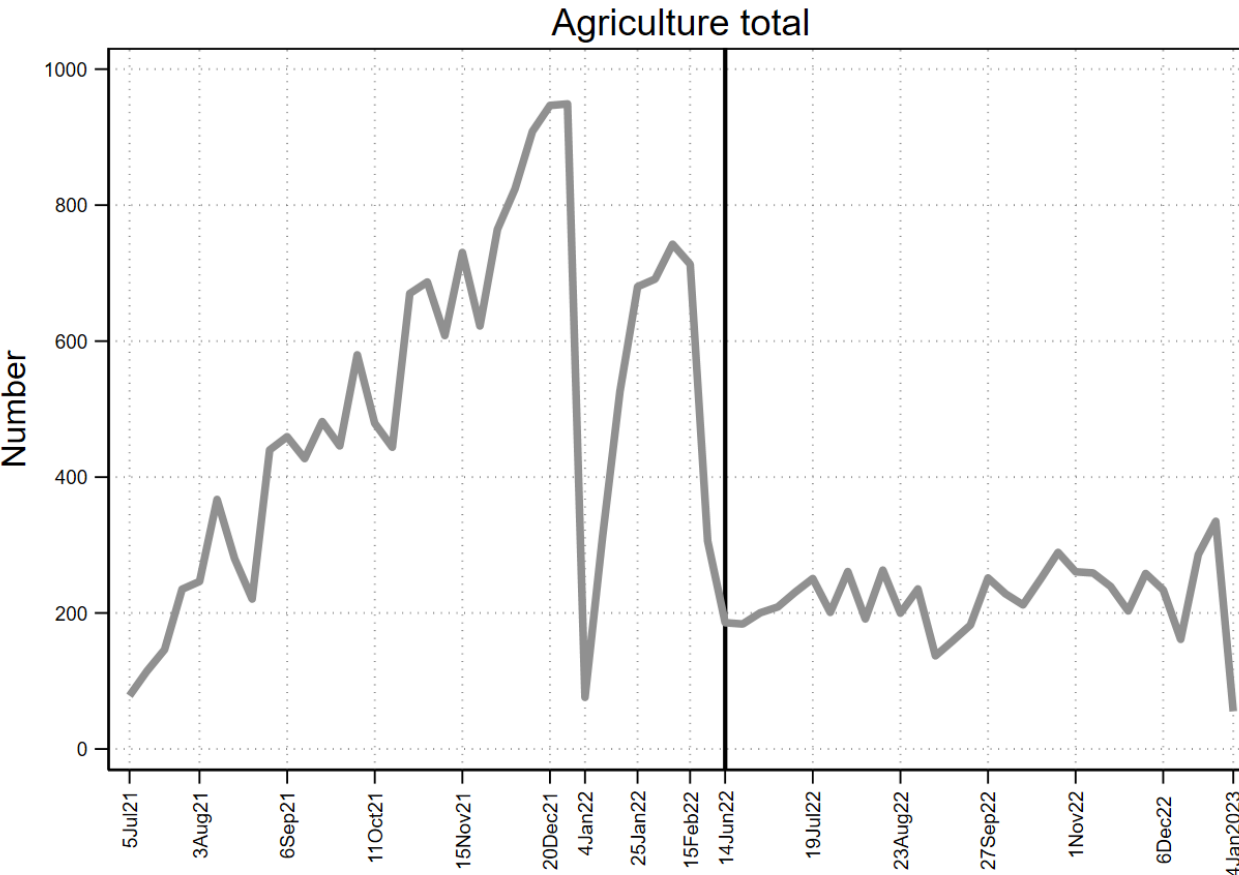
Issues to be addressed

- CMU regulation for land relations monitoring to be adopted
- MoJ to instruct registrars about mandatory price reporting as basis for mortgage market
- Basic monitoring software to be finalized, tested, and installed on server
- APIs for other institutions to be put in place gradually
- Training of target groups & publicity for data to improve land & credit market functioning
- Identify data gaps/problems and take measures to address them sequentially
- Expand to urban land to establish basis for mass valuation pilot (as per ACLIP)
- Explore options for digitizing BTI documents & link to cadaster as basis of reconstruction support

Avg. # of daily agric. & residential land sales 2021/2

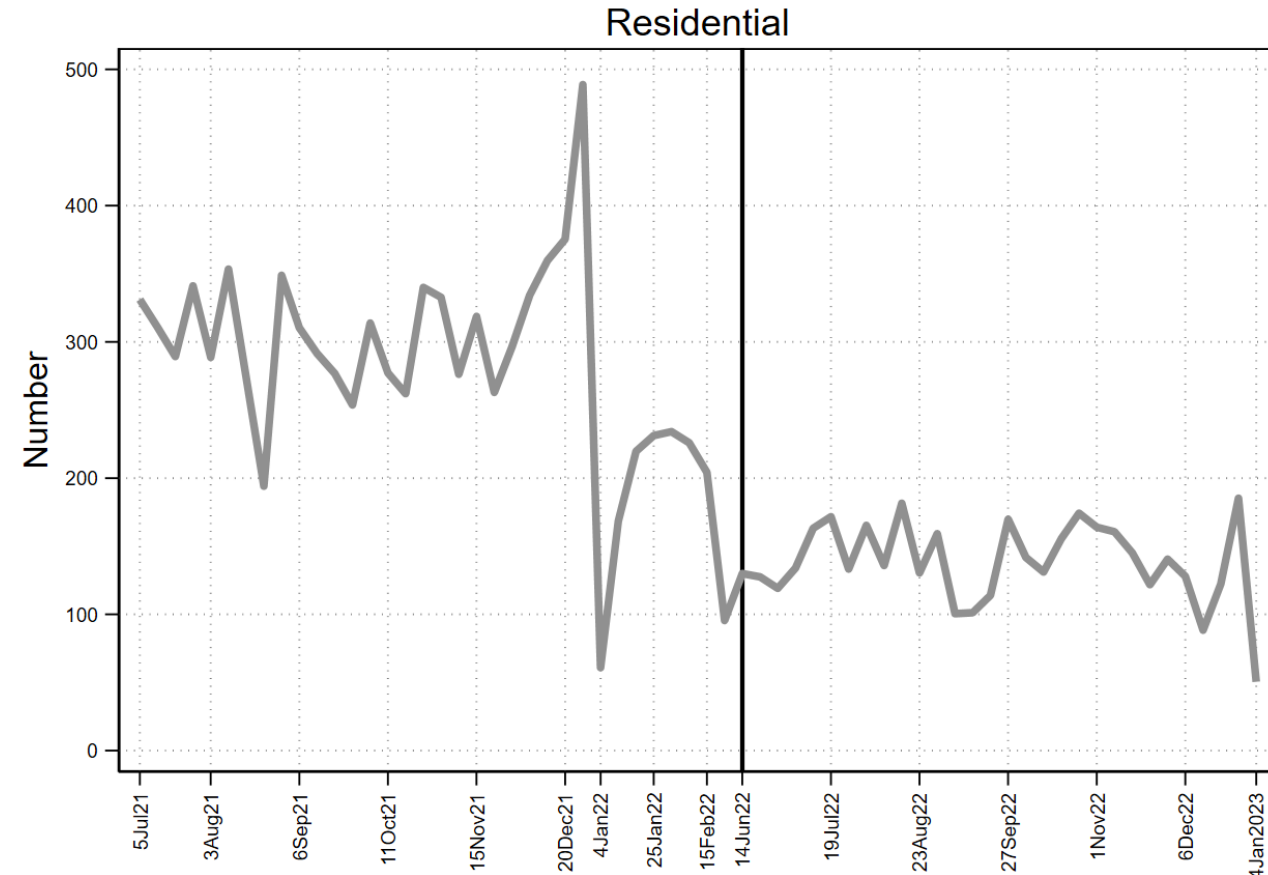
Agriculture

- Steep increase to ≈ 600 pre-war
- Pre year-end jump to almost 1,000
- Drop to about 200 after war



Residential (urban)

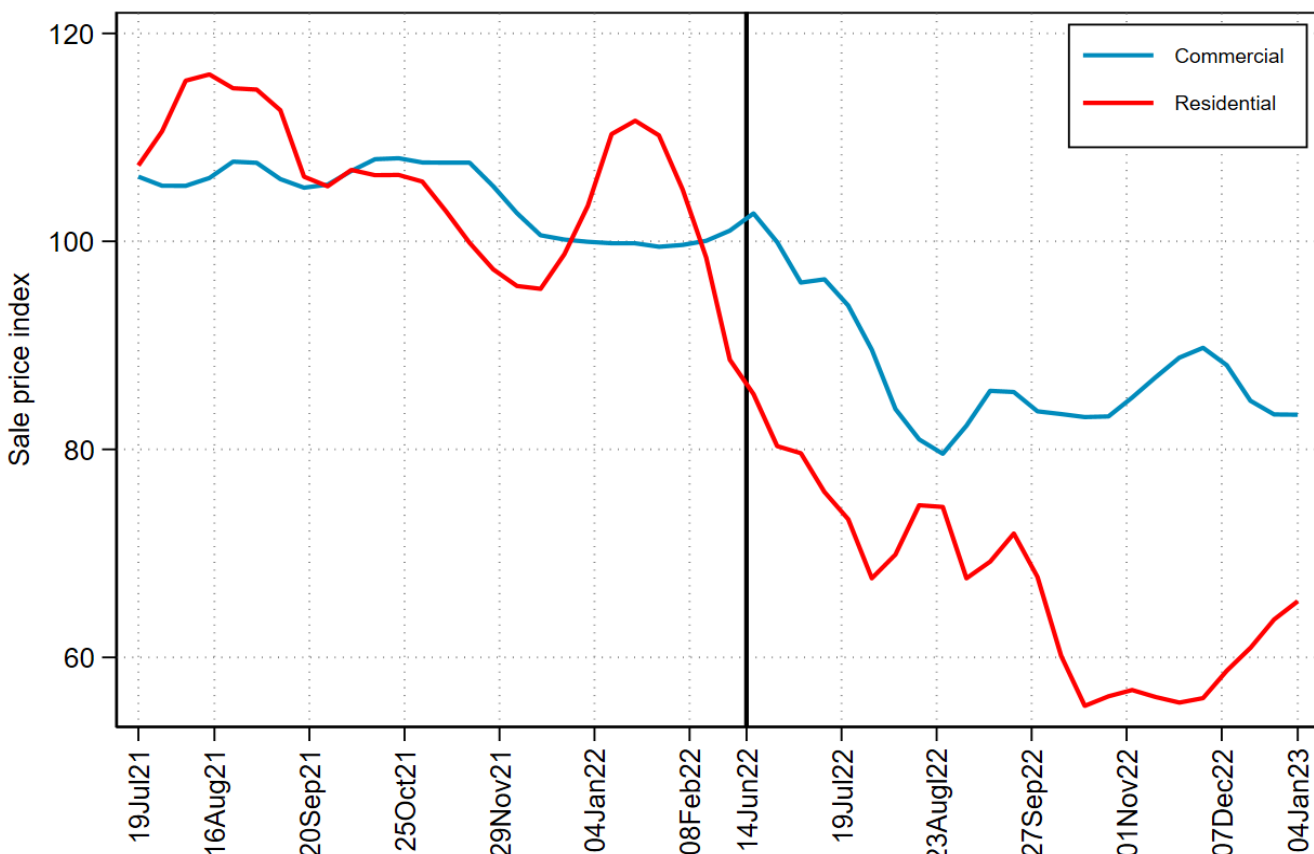
- Steady at ≈ 300 pre-war; pre end-year blip
- Drop to ≈ 150 post-war



Land sales prices

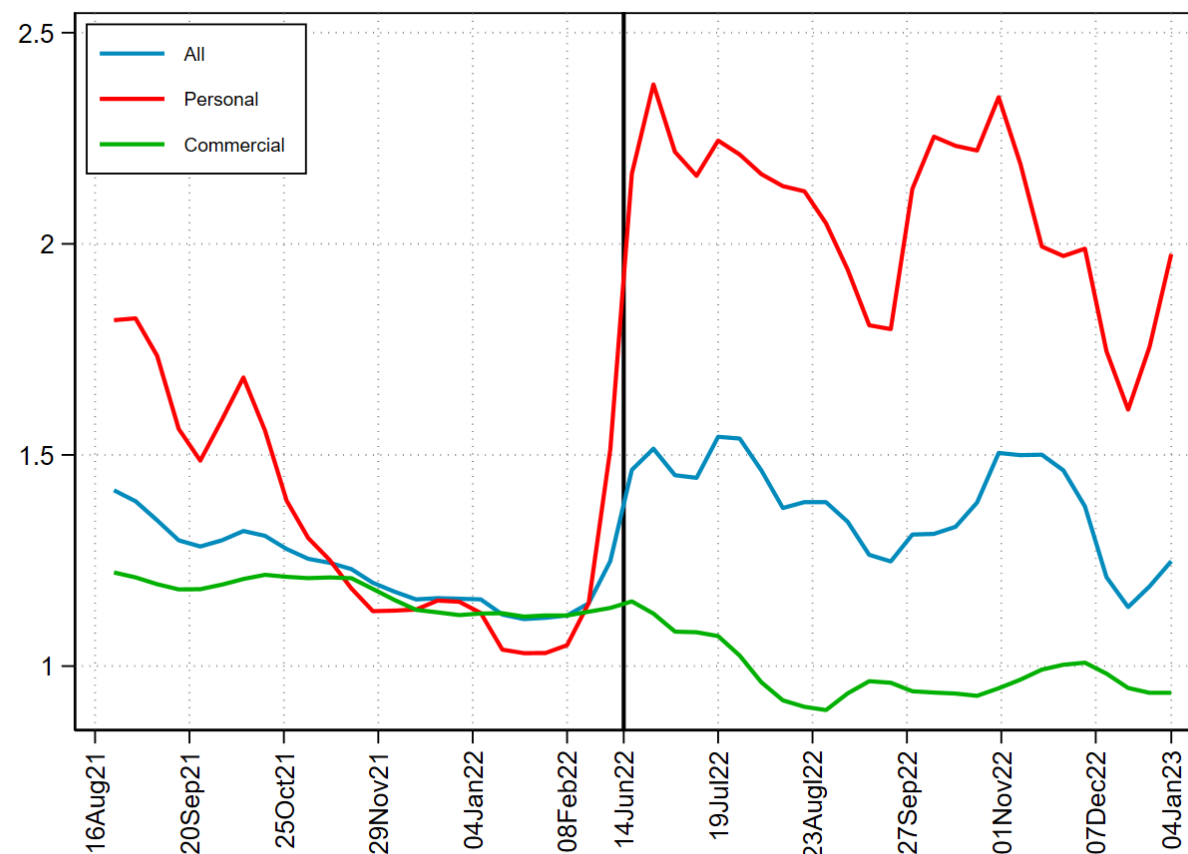
Commercial agricultural vs. residential (index)

- Residential halved after war: Worse economic prospects
- Agric. commercial: Stabilized at 80-90% pre-war level: Fundamentals remain good



Agric. pers. vs. commercial farming (\$000/ha)

- Personal farming land > \$2,000/ha (composition effect)
- Commercial farming land < \$1,000/ha
- Further analysis warranted



Land transactions in 2022

	Jan	Feb	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Agricultural land									
No of sales	12,190	16,794	4,261	6,978	7,740	6,104	7,511	7,695	8,174
Area sold (ha)	29,661	43,437	6,857	10,966	12,289	12,167	13,400	15,059	16,760
Price (US\$/ha)	1,114	1,124	1,601	1,528	1,375	1,214	1,367	1,524	1,164
No of leases	75	67	131	4,809	3,264	20	1,837	127	38
Area leased (ha)	294	284	288	9,116	6,487	102	3,863	341	195
Price (US\$/ha*a)	63	46	53	84	68	54	68	33	53
No emp. Leases	70	50	25	104	60	39	66	29	22
No of mortgages	109	91	35	8	18	17	31	32	59
Resid. (urban) land									
No of sales	5,371	5,237	2,901	4,652	5,117	4,066	4,703	4,728	4,163
Area sold (ha)	654	647	369	596	668	537	597	679	549
Price (US\$/ha)	33,807	29,915	24,807	22,408	21,612	20,898	17,202	16,918	17,792
No of leases	5	14	8	304	132	6	118	21	12
Price (US\$/ha*a)	7,332	27,149	27,147	13,806	7,905	9,941	3,786	12,886	21,880
No of mortgages	275	328	64	132	152	187	186	201	211

Land transactions in 2021 & before vs during war

	Jul	Aug	Sep	Oct	Nov	Dec	Before	During	Ratio
Agricultural land									
No of sales	5,041	9,934	14,523	17,054	21,159	28,448	15,643	6,923	0.443
Area sold (ha)	5,922	18,303	32,763	41,514	52,194	71,229	36,878	12,499	0.339
Price (US\$/ha)	4,146	1,493	1,311	1,309	1,233	1,165	1,228	1,369	1.115
No of leases	13,830	10,143	3,191	983	498	4,596	4,173	1,461	0.350
Area lease (ha)	34,852	26,884	7,801	2,261	1,370	11,364	10,639	2,913	0.274
Price (US\$/ha*a)	70	76	56	64	76	82	73	77	1.055
No emp. Leases	458	325	364	128	133	269			
No of mortgages				19	144	145			
Resid. urban land									
No of sales	10,258	9,196	9,157	9,365	9,462	12,506	8,494	4,228	0.498
Area sold (ha)	1,206	1,089	1,141	1,344	1,188	1,603	1,109	571	0.515
Price (US\$/ha)	33,071	34,187	32,536	31,771	30,250	29,309	31,676	20,033	0.632
No of leases	619	364	122	47	36	140	168	86	0.512
Price (US\$/ha*a)	7,009	8,427	6,756	18,551	10,825	7,139	7,869	9,737	1.237
No of mortgages				140	364	514			



Crop & field damage monitoring

Activities

- Crop monitoring for 2022 by KPI & JRC; data publicly available on [geoserver](#)
- Assessment presented to MAPF, other policy makers and donors
- Continuous assessment of war-induced damage to agricultural fields based on satellite imagery
- Informal WG w MAPF, JRC, KPI & EU established to institutionalize

Results

- Assessment of war impact on 2022 winter crop area completed & [published](#)
- Draft paper on summer crop area & yield w. JRC under preparation
- Initial assessment of 2023 winter crop area (as of end 2022) completed

Next steps

- Improve model for smallholder crops through additional training data
- Collect ground-truth data & assessment of winter crops; link to PSG evaluation
- Potential link to de-mining via SAR
- Explore war impact on protected areas & help identify strategies for rehabilitation in future

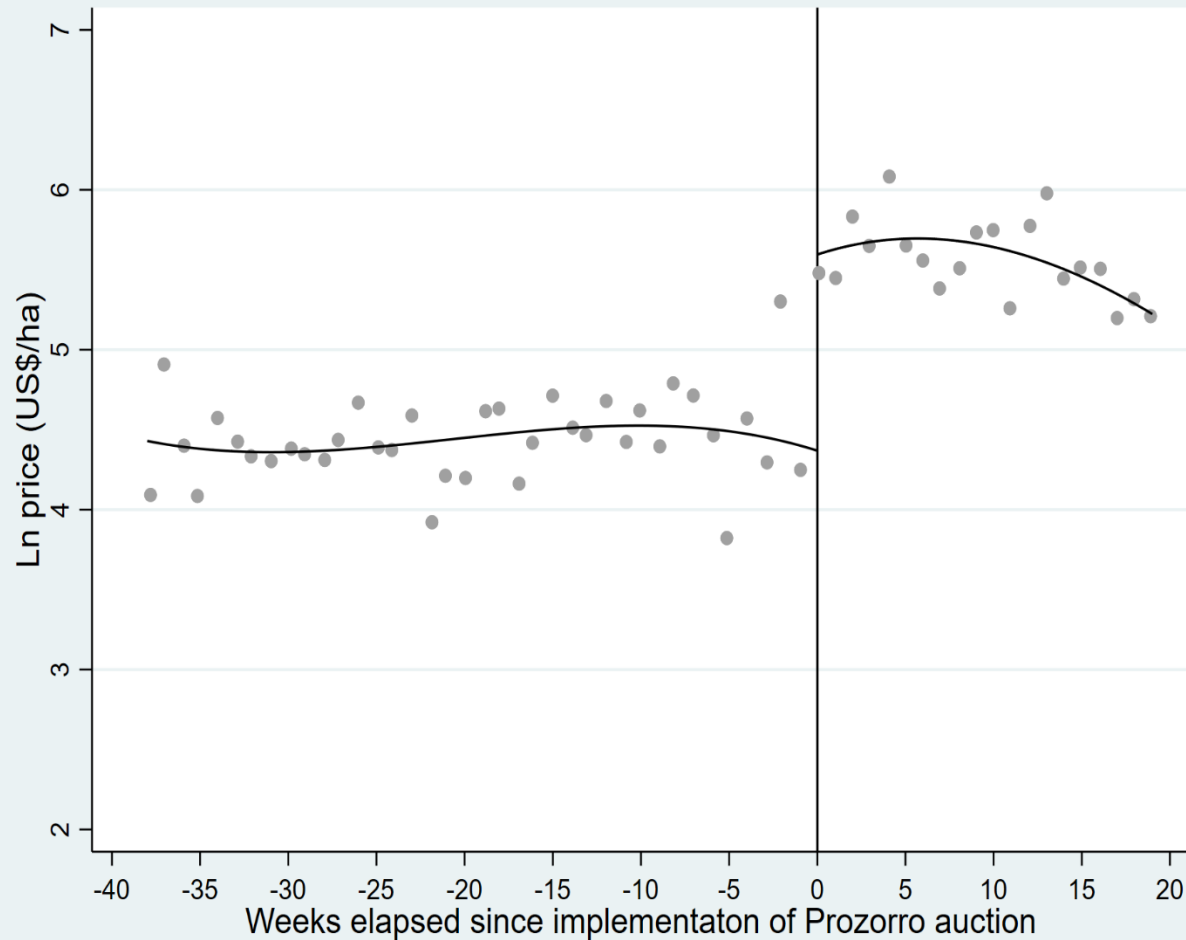
Winter crop area sown for 2023 season

		2019	2020	2021	2022	2023	2019-22	Difference
Total		838.0	556.0	711.3	717.9	507.8	705.8	-28.05
Field damaged	Yes	1975.6	2338.2	1904.4	1082.3	1333.3	1825.1	-26.95
in 2022	No	799.0	494.9	670.4	705.4	479.5	667.5	-28.15

Most field damages seem transitory (link to mining at disaggregated level still to be explored)

RS data to help validate & improve MAPF survey on spring season planting intentions

Impact of e-auctions – results (see [paper](#))



Determinants of lease price in e-auctions

Prozorro auction	0.931*** (0.111)
SETAM auction	-0.207*** (0.0416)
SGC offline auction	-0.381*** (0.0352)
Normative value	0.594*** (0.0213)
No. obs.	20,688
R ²	0.296

Sample 1: All auctions since 2015

- Prozorro e-auction increased price by 93%
- SETAM *reduced price* by 21% & SGC org. by 38%

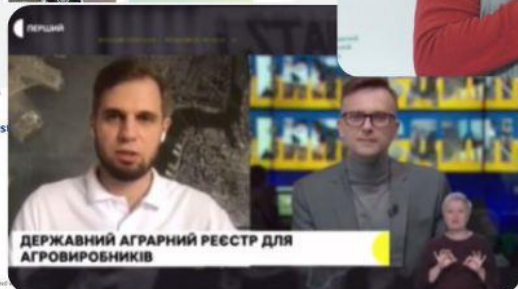
Sample 2: & 2021/22 only

- Doubling of prices as soon as Prozorro starts

Implication: Reform was very effective; vindicates reinstatement of e-auctions under martial law on Oct 19, 2022



With EU support, Ukraine has launched the State Agrarian Registry, an online platform for farmers' support



SAR LAUNCH

PUBLIC AWARENESS CAMPAIGN

TRAINING PROGRAM

APPLICATIONS RECEIVED & APPROVED

SAR RESULTS PRESENTATION

MAPF, EU, WB & IPRSA



Державний
Аграрний
Реєстр

Communication Support to SAR

WWW.DAR.GOV.UA

Support to MAPF communication and outreach

Activities

- Supported MAPF information & communication campaign for launch/implementation of SAR & PSG (press releases, SAR website w. instructional videos, social media; 10,000 leaflets and 2,700 posters)
- Support to building capacity in MAPF for organizing 8 trainings, press-events, 7 public events (TV broadcast, webinars; prepare high-level public event on SAR results)
- Produce video with testimonial from farmers having received PSG support
- Extensive training of staff from Ministry & FAO on use of SAR for program implementation

Results

- Successful outreach on SAR and PSG to over 1,000 OTGs and farmers
- Op-Eds on crop damage assessments; e-auctions
- Broad dissemination of analysis on crop damage (≈ 800 downloads) and e-auctions (≈ 450)

Next steps

- Training of banks, USAID, PCG staff etc.
- Targeted outreach to lagging OTGs to teach them how to build on SAR

Priority activities for coming 6 months I

Ensure automated land governance monitoring

- Support passage of substantive resolution (in line with ACLIP)
- Develop SW/APIs & web-based interface; implement to produce routine reports (incl. on prices, land-related court cases, mortgages)
- Explore link to damage assessment & reconstruction-related programs for urban land

SGC transformation

- Review & discuss technical assessment report
- Agree on TA needs & implementation

Support implementation & external monitoring of anti-corruption plan land part

- Identify & address NACP capacity needs
- Define outcome indicators drawing on automated monitoring & agree on reporting framework
- Assess need for technical/IT support in specific areas

Priority activities for coming 6 months II

Ensure readiness of SAR for use by banks & for all types of state support

- Adoption of regulatory framework; technical support to MAPF
- Adjustment of software, training and dissemination

Evaluate results PSG & other programs; draw implications for reconstruction

- Remote sensing of crop conditions for universe of program participants
- KIMS survey round II; targeted short surveys of specific sub-populations (incl. FLA callers)

Support design & evaluation of PCG & other instruments

- Instruments & matching formulas/conditions for PCG & complementary tools to support diversification
- Design implementation strategy w. private sector participation & evaluate

Thank you!

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