

NASA GSFC Statement of Work																			
Activity	Sector	O	N	D	J	F	M	A	M	J	J	A	S	Lead	Key Team Members	Dependencies	Users	Notes	
1. Operational Seasonal Water Availability Measures and Forecasts																			
1.1 Current Capabilities Maintained																			
Comparison of LSM outputs and remotely sensed products (SSEB, NDVI, GRACE)														CP/KS	KS, JJ, DS, AH				In publications, presentations, and as requested by FEWS NET partners
Comparisons LSM outputs and other data (AGMIP, GRDC, USDA)														CP/KS	KS, JJ, DS, AH				In publications, presentations, and as requested by FEWS NET partners
1.2 New Activities to be Undertaken																			
FLDAS regional models														CP/AM	JJ				superceded by global model under Activity 3
2. Transition to LIS 7 for Central Asia snow-modelling operations																			
FLDAS central Asia Noah 3.6 (GDAS) w/ LIS 7 + slope aspect + additional inputs														CP/AM	JJ		USGS EROS		current model
FLDAS central Asia w/ MODIS snow covered area compare														CP/AM	JJ				started FY20
FLDAS central Asia with Noah-MP (GDAS)														CP/KS	JJ/KS		USGS EROS		target: operational at the start of WY2021
FLDAS central Asia with Noah-MP (GDAS-IMERG)														CP/KS	KS		USGS EROS		FLDAS central Asia with GDAS-IMERG, testing during FY21
3. Expand and improve operational seasonal water availability modeling and forecasting																			
FLDAS global model (MERRA-CHIRPS)														CP/KS	JJ	CHC CHIRPS and CHIRPS Prelim	USGS EROS		current model, started FY20
Water availability estimates														CP/KS	JJ/KV	CHC CHIRPS and CHIRPS Prelim			started FY20
NHyFAS NMME-based seasonal forecasts for Africa														CP/KS	AH, KS	CHC CHIRPS and CHIRPS Prelim	UCSB CHC, NOAA		current forecasts, started FY20, NMME from CPC (figures, and data?)
FLDAS global model Noah-MP (GDAS-IMERG or GDAS-AgMERC)														CP/KS	DS	CHC AgMERC?	USGS EROS		considering IMERG-GDAS, AgMERC-MERRA (depending on latency and availability); testing during FY21
4. Maintaining NDVI for FEWS NET monitoring use																			
5. Support to the GEOGLAM Crop Monitor for Early Warning effort																			
6. Support for adaptation of NASA FSO activities to meet FEWS NET needs.																			
Engage with consortium as needed.														CP/KS	KS				
7. Afghanistan streamflow monitoring and sub-seasonal forecasting in the FEWS NET Land Data Assimilation System (FLDAS)																			
1KM streamflow parameters for Afghanistan														CP/AM	AG		USGS EROS		Completed FY20
Support for routine generation of streamflow hydrographs for Afgh.														CP/KS	DS/KS		USGS EROS		USGS EROS leads hydrograph generation
CHIRPS-GEFS sub-monthly hydrologic forecasts														CP/KS	AH	CHC CHIRPS-GEFS	USGS EROS		Targeted for FY22
8. Extended Outlook Crop Monitor																			
8.1 NASA GSFC Activities																			
Support of pilot activities														CP/KS	AH		UCSB CHC, NOAA, UMD		Ad hoc regional pilot activities for critical time periods, as identified by FEWS NET
Research on long lead forecasting of terrestrial variables														CP/KS	BC, TBD	NOAA long lead forecasts			Ben Cook currently, staffing for FY21 TBD
8.2 UMD Activities																			
Extended outlooks																			to be filled in by UMD
9. Support for the development of new tools for detecting and assessing resilient agricultural systems farm performance																			
Develop ML algorithms for NDVI detection														CP/KS	MB/SK				Task starts 07/2020
Test and analyze developed methods in specific geographies														CP/KS	MB/SK				ROI to be selected in coordination with USAID BFS and SERVIR, Mali proposed
10. Communications Activities																			
publication editing														CP/KS	CP, KS, AH, DS				coordination with UCSB (NHyFAS, precip) & NOAA PSL (RefET)
presentations (AGU, AMS, invited)															CP, KS, AH, DS				coordination with science team co-authors (NHyFAS - Shrad), Afgh streamflow (USGS)
blog posts														CP/KS	KS				
news stories/social media														CP/KS	KS				
Training materials/fact sheets														CP/KS	KS		UCSB CHC, CHEMONICS, KIMETRICA		developed in coordination with USGS & NOAA PSL
Improved Agroclimatology Training Material														CP/KS	KS		USGS EROS, UCSB CHC, NOAA		
External outreach														CP/KS	KS				
11. Data Management/IT Activities																			
Code maintenance (SLES 12, US 7.X)														CP/KS	JJ, AH				
Data transfer to UCSB														CP/KS	JJ		UCSB CHC		
Data transfer to USGS														CP/KS	JJ		USGS EROS		
Data transfer to NOAA														CP/KS	JJ		NOAA		e.g., MERRA for RefET
Forecast data transfer														CP/KS	KS/AH		NOAA/USGS		need to determine how to distribute/who hosts
Data transfer to NASA (GES DISC)														CP/KS	JJ				
NOTES:																			
1 green = major objective from 5yr SOW																			
2 grey = sub-task in 5yr SOW																			
3 under months 1=high priority, 2=background effort, 0=ongoing																			

UMD Statement of Work																	
Activity	Sector	Month												Lead	Key Team Members	Interdependencies	Notes
		O	N	D	J	F	M	A	M	J	J	A	S				
1. GEOGLAM Crop Monitor for Early Warning																	
1.1 maintain current activities																	
CM4EW Routine															Christina Justice, Brian Barker, Kara Mobely	FEWSNET regional analysts, UCSB CHC	Compiling updates on agricultural conditions throughout the month and relevant reports; updating the interface with crop calendars prior opening the interface for monthly submissions; opening the interface to monthly submissions and initiating discrepancy discussions prior to the monthly telecon; identifying regions of interest for regional outlook reporting and coordinating inputs with CHC; developing Climate Influences draft text with inputs from CHC covering ENSO climate driver reporting; compiling crop condition discrepancies and sending out discrepancy powerpoint prior to telecon; leading the monthly CM4EW; compiling and sending regional draft text based on updates on agricultural conditions, monthly submissions from analysts, and discussions on the telecon; leading discrepancy discussions between agencies; compiling graphics and text into the full draft report; editing and finalizing report for publication.
Crop Monitor Routine Enhancement															Christina Justice, Brian Barker, Kara Mobely	UCSB CHC, NASA, EC JRC, UMD, and NOAA.	Compiling and enhancing core data products including crop calendars based on updates from analysts; incorporating updated cropland and type maps where available; and enhancing the web-enabled crop assessment portal and available data products and visualizations. Working with the EW community to discuss and evaluate further expansion/enhancements to the CM4EW.
Special Reports & Conflict Reports															Christina Justice, Brian Barker, Kara Mobely	FEWSNET regional analysts, UCSB CHC	Drafting text for mid month special reports and conflict reports; coordinating with regional analysts and CHC group; editing and compiling report; report publication.
1.2 New Activities																	
Climate Forecasts															Christina Justice, Brian Barker	UCSB CHC	Expansion of climate forecasts integration into CM4EW reporting covering short, medium term and seasonal forecasts and global NMME 30 day SubX forecasts.
1.2.1 Short term forecast															Christina Justice, Brian Barker	UCSB CHC	Incorporation of short term 2 week (10 day) forecasts into CM4EW regional outlooks across all CM4EW regions
1.2.2 Medium term forecast															Christina Justice, Brian Barker	UCSB CHC	Incorporation of 1 month SubX forecast products into CM4EW regional outlooks across all CM4EW Regions and into the Global Outlook of CM4EW and CM4AMIS reporting.
1.2.3 Seasonal forecast															Christina Justice, Brian Barker	UCSB CHC	Incorporation of 3 month seasonal forecast products from NMME; develop seasonal forecast updates to be published prior to and at key points in the season across all CM4EW regions
1.2.4 Climate Influences																UCSB CHC	Continue development of Climate Influences reporting including ENSO and SST updates
1.2.5 Information products															Christina Justice, Brian Barker	UCSB CHC, Regional Analysts	Production of forecast graphics for Regional Outlooks; continue development of forecast graphics for CM4EW
1.2.5 Interpretation of forecast products															Christina Justice, Brian Barker	UCSB CHC, FEWSNET Regional Analysts	Development of monthly regional outlook text by CHC to interpret forecasts into agricultural outcomes with inputs from FEWSNET regional analysts. Development of Seasonal Outlooks (NMME) before the start of the season over areas with high skill. Regional Outlooks for Special Reports
Engage with regional outlook forum and additional forecast groups															Christina Justice, Brian Barker, Catherine Nakalembe (East Africa)		Engaging with Regional Climate Outlook Forums IGAD ICAPAC/ GHACOF through the Eastern Africa Crop Monitor
Exploring integration of rangeland conditions															Christina Justice, Brian Barker, Kara Mobely	FEWSNET regional analysts	Development of baseline data sets for Rangelands including calendars and best available rangeland mask. Incorporation of rangeland conditions into CM4EW reporting on a experimental basis starting with East Africa as the first target region.
Crop Monitor continued development															Christina Justice, Brian Barker, Inbal Becker-Reshef		Enhancing the content and maps of the monthly bulletin; expanding participation of national and regional organizations; engaging more broadly with current and prospective end users and stakeholders;
2. Global Crop Monitor Products																	
Production of Global products integrating CM4EW and AMIS															Christina Justice, Brian Barker, Kara Mobely, Inbal Becker-Reshef		Development of global products integrating AMIS and Early Warning to present global view of crop conditions and global forecast information using 30 day SubX; Exploring production of a global bulletin
3. NASA HARVEST																	
engage with consortium as needed																	
4. Communications & Admin Activities																	
Blog posts															Christina Justice, Brian Barker, Kara Mobely		
News stories/social media															Christina Justice, Brian Barker, Kara Mobely, Mary Mitkish		@GEOCropMonitor Twitter Account; NASA Harvest Website, GEOGLAM Website and blog posts, NASA Earth Observatory articles; contributing to news stories and podcasts.
Traning materials/Fact sheets															Christina Justice, Brian Barker, Kara Mobely		Continued development of training materials when updates occur to the interface and systems.
Outreach															Christina Justice, Brian Barker, Kara Mobely		Publication of CM4EW report on Relief Web and Prevention Web; producing outreach materials in print and online, reaching out to broader EW community
8. Data Management/IT Activities																	
Website Maintenance and Improvement															Antonio Sanchez, Mike Humber, Brian Barker,		
Interface/database maintenance & improvement															Antonio Sanchez, Mike Humber, Dan O'neill		
EO Data products updates.															Antonio Sanchez, Mike Humber, Dan O'neill	UCSB CHC, NASA, EC JRC, UMD, and NOAA.	
8. Extended Outlook																	
Extended Outlooks															Brian Barker, Christina Justice, Inbal Becker-Reshef	FEWSNET regional analysts. UCSB CHC, NOAA, NASA	Production of extended outlook crop condition graphics based on FEWSNET regional analyst inputs.
NOTES:																	
green = major objective from 5yr SOW																	
grey = sub-task in 5yr SOW																	

UMD Statement of Work

Activity	Sector	O	N	D	J	F	M	A	M	J	J	A	S	Lead	Key Team Members	Interdependencies	Notes
under months 1=high priority, 2=background effort, 0=ongoing																	

NOAA Statement of Work																
Activity	Sector	O	N	D	J	F	M	A	M	J	J	A	S	Lead	Key Team Members	Notes
3. Development of Gridded Atmospheric Forcing Dataset																
Basic development (MERRA-2 coarse)														MH		completed Aug 2019
Downscaling v1 (to MERRA-2 fine)														MH		completed Aug 2019
Basic development (EDDI from MERRA-2 fine)														MH		completed Aug 2019
Routine operations (MERRA-2 coarse and fine)														MH	CS (Cathy Smith, PSL)	move to NOAA server. Across all months, to show ongoing operational support.
Applications support (WRSI, SPEI, EDDI)														MH		w/ USGS, UCSB CHC. Across all months, to show ongoing operational support.
Evaluation of MERRA-2 ETo against in-situ ETo (MERRA-2 coarse - Africa)														MH		This refers to v1 downscaled product
Evaluation model intercomparison (MERRA-2 vs. GDAS vs. PGF)														MH	DPS	DPS at NASA GSFC
Publication/data descriptor/documentation														MH		w/ NASA, USGS, UCSB, AH; Submission of Nature Scientific Data manuscript on MERRA-2 ETO
Verification of MERRA-2 wrt observations (coarse and fine - global)														MH		
Bias-correction of MERRA-2 wrt observations (coarse - global)														MH		
Downscaling v2 (to new MERRA-2 fine)														MH		
Assimilate ETo point observations into new MERRA-2 ETo fine - global														MH		
Enhance global EDDI dataset (from v2 downscaled/assimilated MERRA-2)														MH		
Develop NCEP ETo data for CPC														MH		CPC - This task could also go across all months, for ongoing operational support.
Automate NCEP ETo updates														MH		
Produce global EDDI dataset (NCEP data)														MH		Depending on outcome of discussions with Wassila at CPC, later in August
Construction of ERA5 ETo reanalysis, automate updates														MH		
Evaluation model intercomparison (MERRA-2 vs. NCEP vs. ERA5)														MH	DPS	DPS at NASA GSFC
Downscaling v2 (to NCEP, ERA5 fine)														MH		
Bias-correction of ERA5 and NCEP wrt observations across globe														MH		
Merging/assimilating 3 bias-corrected ETo reanalyses and observations (NCEP/NCAR+MERRA2+ERA5+observations) - global														MH		This task should go hand-in-hand with the one above.
Enhance global EDDI dataset (v2, based on v2 downscaled/assimilated MERRA-2+NCEP+ERA5 dataset)														MH		
5. capacity building																
documentation																w/ other science team (NASA, NOAA CPC, USGS, UCSB)
Study: decomposing global drivers of ETo variability and trends														MH		this will be the initial analysis period, with completion and submission to follow in subsequent FY
Study: diagnosing demand drivers of drought in Africa														MH	LH (Laura Harrison), CF, GH	w/ other science team (NASA, NOAA CPC, USGS, UCSB) - this will be the initial analysis period, with completion and submission to follow in subsequent FY
consultations w/ other science partners																w/ other science team (NASA, NOAA CPC, USGS, UCSB) - Q1: Engagement with UCSB on three global RefET streams (MERRA-2, NCEP, and ERA5) to discuss planning: (i) how to assimilate the three streams into one product; (ii) how to resolve their different resolutions; and (iii) how to update the assimilation for when the latest data from a stream with a longer latency (MERRA2 > ERA5 > NCEP; NCEP latency is 2 days) comes online. NOAA-PSL will have to resolve data storage issues before action on (i)-(iii).
6. Management																
budgets															AH	
quarterly reports															AH	
NOTES:																
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under months 1=high priority, 2=background effort, 0=ongoing																

NOAA Statement of Work															
Activity	Sector	Months											Key Team Members	Notes	
		O	N	D	J	F	M	A	M	J	J	A			S
1. Weather and Climate Diagnostics													1.1		
Southern Africa - daily precip characteristics														AH	Tamuka, Laura, paper submitted to J. Climate
Southern Africa - multi-year droughts														AH	Tamuka & McNally, paper to be submitted
Precipitation forecasts related to agricultural production														AH	w/ UCSB, early stages of development
Evaluation of atmospheric models over Afghanistan														AH	Paper to be submitted to J. Climate
La Nina Fact Sheet														AH	LH w/ UCSB, in early preparation
Climate mode fact sheets for IOD, SIOD, etc.														AH	LH, TM, GG w/ UCSB and regional scientists
FACTS website and datasets														AH	PSL and UCSB primary users right now
2. Predictions and Predictability															
Model analog-based predictions up to two years														AH	A regular exercise. Focus on SST indices and move on to other variables as needed
Two weeks to six months predictability research														AH	Melissa Breenen will start January 4, 2021. First topic will be precursors and predictability to blocking and low precipitation episodes over Afghanistan.
Six months to two years predictability research														AH	Jaille Lou scheduled start October 1, 2020. Start date likely to change based on when he gets visa.
3. Monthly seasonal forecast review															
Prepare and respond in capacity as Pillar 1 briefer														AH	evaluation, application
Prepare as principal for Central Asia														AH	HJ, JR, MB training Hari Jayanth/USGS - is there a transition goal? by the end of the season? maybe not till next year.
Participation in technical call														AH	
Lead Pillar 1 brief														AH	
4. training/capacity building															
Develop agroclimatology training														AH	w/ other science team (NASA, NOAA CPC, USGS, UCSB)
Deliver agroclimatology training to Pillar 1														AH	w/ other science team (NASA, NOAA CPC, USGS, UCSB)
Consult with other science partners														AH	w/ other science team (NASA, NOAA CPC, USGS, UCSB)
Trainings with regional scientists for network development/capacity building.														AH	w/ other science team & regional scientists
5. Management															
Staff and new hires														AH	
Budget														AH	
POC for other NOAA PSL fewsnet														AH	
Reporting														AH	
NOTES:															
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grey = sub-task in 5yr SOW															
under months 1=high priority, 2=background effort, 0=ongoing															

Climate Hazards Center (CHC) Statement of Work (SOW)																	
Activity	Sector	O	N	D	J	F	M	A	M	J	J	A	S	Lead	Key Team Members	Notes	Dependencies
Improved Agroclimatology Training Material														GH	CF, LH, SS, IWH	coordinate w/ other sci partners	USGS/NOAA/NASA
Outreach																Example: Agrilinks webinar, department talks	USAID (Agrilinks)
B. Data Management/IT Activities																	
B.1 Server maintenance	DATA													MC			
S. Management																	
Staff and new hires														GH			
Budget														GH			
POC for EWT, Hub and other Science Partners														GH			
Reporting														GH			
NOTES:																	
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grey = sub-task in 5yr SOW																	
under months 1=high priority, 2=background effort, D=ongoing																	

USGS EROS Statement of Work (FY21)																	
Activity	Sector	O	N	D	J	F	M	A	M	J	J	A	S	Lead	Key Team Members	Other FEWS NET partners	Notes
1. Agroclimatology Technical Support																	
1.1 Capacity Building																	
1. Agroclimatology training (@EROS, virtual, or elsewhere)	1.1													Rowland	Budde	NOAA PSL (UCSB), (NASA), EWT	NOAA: Hoell; UCSB: Husak (UCSB has been involved in the past, especially for CHIRPS rainfall estimation); (On request from EWT Home Office)
2. Weekly Weather Hazards														Budde	Pervez, Rowland, Jayanthi	NOAA CPC	All staff that present the weekly weather hazards briefing
3. Monthly Seasonal Forecast Calls														Budde	Jayanthi, Rowland, Pervez	NOAA CPC, NOAA PSL, UCSB, NASA	NOAA PSL: Hoell; UCSB: regional scientists; USGS: Jayanthi for active participation; Budde, Rowland, Pervez for attendance.
4. Agroclimatology training updates (finite)														Rowland	Budde	NOAA PSL, NASA, UCSB, EWT	NOAA PSL: Hoell; UCSB: Husak; NASA: Slinko. Will depend upon POC and coordination from EWT HO, and feedback from EWT HO and BHA
2. Development of New Methods, Tools and Datasets																	
2.1 eMODIS NDVI																	
Conversion from eMODIS to eVIIRS	2.1													Budde	Young, Anthony	-----	Will work to implement (download, test, evaluate, operationalize) procedure developed by/for CONUS group
2.2 CCD-based rainfall estimates																	
Improved daily thermal infrared CCD-based rainfall estimates														Funk		UCSB	Collaborative effort
Improved daily thermal infrared CCD-based rainfall estimates														Funk		NOAA CPC	If desired by CPC, USGS will provide advisement and support
2.3. EWX, EWX lite																	
Add FLDAS soil moisture data and time series (Africa and Yemen)														Budde, Rowland	Young, Anthony	NASA GSFC	NASA: Kim Slinko
Add FLDAS runoff data and time series (Africa and Yemen)														Budde, Rowland	Young, Anthony	NASA GSFC	NASA: Kim Slinko
Add FLDAS runoff per capita (and time series) (Africa and Yemen)														Rowland, Budde	Young, Anthony	NASA GSFC	NASA: Kim Slinko
Add CHIRPS, LST, and ET to South America window														Budde	Young, Anthony	-----	
Add FLDAS soil moisture, runoff, and runoff per capita (all windows)														Budde	Young, Anthony		
Update historical mean for anomaly and SPI products														Rowland	Budde, Anthony	UCSB	TBD after release of CHIRPS 3.0
2.4. CHIRPS-final & prelim updates in USGS Tools/Web																	
Convert WRSI from RFE/GDAS to CHIRPS/ETo														Rowland	Young, Anthony	NOAA PSL, UCSB	NOAA for access to ETo, UCSB for access to CHIRPS
Convert WRSI-extended to use ensemble mean from previous years														Rowland	Young, Anthony	UCSB	potential collaboration since they have already implemented this
Add forecast WRSI from CHIRPS-GEFS and ETo (average)														Rowland	Young, Anthony	UCSB	will depend upon CHIRPS-GEFS and forecast ETo; UCSB has already implemented this using mean ETo
Convert Africa 30-day rain/dry days from RFE to CHIRPS														Rowland	Young, Anthony	UCSB	for access to CHIRPS, see analysis of daily CHIRPS vs daily RFE, ARC2, and IMERG
Convert water points process from RFE/GDAS to CHIRPS/ETo														Rowland	Young, Budde	NOAA PSL, UCSB	NOAA for access to ETo, UCSB for access to CHIRPS, Shrad at UCSB as part of SERVIR AST project.
Add water point forecasts (CHIRPS, PET) to routine processing														Rowland	Young, Budde	NOAA PSL, UCSB	NOAA for access to ETo, UCSB for access to CHIRPS; Shrad at UCSB as part of SERVIR AST project.
add 6-month SPI to suite of SPI products														Rowland	Young, Budde	UCSB	can be completed at UCSB; EROS will download and process to add to SPI products, and will eliminate the 1-pentad SPI. Or EROS can develop from the python script provided by UCSB
2.5 Knowledge Base Updates																	
CHIRPS / CHIRTS														Boiko	Rowland, Budde	UCSB	updated once a year: % anomalies and difference anomalies (based on 30-yr and 15-year means). Update CHIRTS as available
NDVI / ET / WRSI														Boiko	Rowland, Budde	-----	update all products annually (annual anomalies)
Add all available products for newly identified countries														Boiko	Rowland, Budde	USAID	Depends upon request(s) from BHA and/or EWT HO
2.6 Hobbins RefET updates																	
Water points																	cf. 2.4
WRSI																	cf. 2.4
updated WRSI and Water Points with new/improved RefET														Rowland	Budde, Young, Boiko	NOAA PSL	bias correction via data assimilation, downscaling improvement, lower latency, schedule TBD with NOAA PSL
3. Spatial Data management and Infrastructure																	
3.1 USGS Early Warning Website																	
Standard EWX processing/updates	3.1													Budde	Anthony	UCSB	CHIRPS, LST, RFE
Standard data processing/updates														Budde	Rowland, Young, Anthony	UCSB	UCSB: CHIRPS and derivative products
Standard data processing/updates														Budde	Rowland, Young, Anthony	NOAA CPC	NOAA CPC: RFE and derivative products, GFS
Standard data processing/updates														Rowland	Budde, Young, Anthony	NASA	SWE, snow depth, soil moisture, and derivative products
Basin-level streamflow and runoff (Afghanistan)														Pervez	Rowland, Budde, Anthony	NASA	still in research w/ nasa: current processing for MAMI 2021
Basin-level streamflow and runoff (Afghanistan) with HyMAP2 and Noah MP														Pervez	Rowland, Budde	NASA	still in research w/ nasa: operational for MAMI 2022
Hosting CHIRPS-GEFS early estimate graphics														Rowland	Budde, Anthony, Boiko	UCSB	CHIRPS-GEFS graphics: release on USGS web portal in Jun 2021 (with new updated GEFS from NOAA PSL)
EWX development, maintenance, updates														Rowland	Anthony, Budde	UCSB	Support to UCSB EWX instance; Husak, Landis, Peterson (support to RCMRD); GeoEngine's implementation at UCSB in Nov 2020
WRSI for GDH														Rowland	Young, Budde	EWT	Dekadal WRSI output available for EWT via HTTPS server
Remote Sensing products for the Hub														Rowland	Anthony, Budde	Hub	Support to the Hub (Pillar 2) regarding access and display of USGS/FEWS NET agro-climatology monitoring products
4. Custom analysis and Briefing Support																	
Ethiopia dekadal reports														Pedreras	Rowland	UCSB	Diriba, Husak, Harrison, Belg and Kiremt seasons
Monthly seasonal forecasts														Rowland	Jayanthi	NOAA CPC, NOAA PSL, UCSB	NOAA PSL: Hoell; UCSB: regional scientists; USGS: Jayanthi
Monthly telecons with regional scientists														Rowland	Budde, Funk	UCSB	UCSB: Husak, regional scientists
Monthly GEOGLAM CM4EW telecons/reports														Budde	Jayanthi, Rowland	UMD	crop classification: Jayanthi; report editing: Budde
Afghanistan/Central Asia seasonal monitor														Pervez	Jayanthi, Budde	EWT	EWT Home Office, Row Regional Representative, Afghanistan Office
Ad-hoc requests from EWT														Rowland	Budde, Boiko	EWT	Geospatial analyses; TBD with EWT
6. Institutional Support and Development																	
8. Specific Activities for BHA																	
																	ad-hoc support to new bureau
8. Co-op agreement with UCSB																	
MI and seasonal yield estimation														Rowland	Funk	UCSB, EWT	UCSB: Shukla, Husak, Davenport; additional collaboration with EWT. Updates should appear in USGS quarterly reports.
Extended outlooks														Rowland	Funk	UCSB, NASA, NOAA	UCSB: Shukla, Husak; additional collaboration with NASA, NOAA PSL. Updates should appear in USGS quarterly reports
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