

CGRI Scorecard Update November 15, 2023

Attendees: 45+ attendees

Goal 3: Stabilize grassland bird population in 20 years

- Bird specific approach not enough to be successful. Formation of working group includes bird people plus a community of practice of people. Locations to implement grassland bird conservation. Spatial prioritization with grassland birds as the target or asset, base model in development that integrates bird data to ID where on landscape we can look at spatial variation in grassland bird population trend.
- Bring in other data layers as a scenario building exercise to help ID strategic locations for conservation. Leveraging CGRI assessment layer of risk of conversion and tree and shrub encroachment. Climate layer to help with resiliency for the future. Also looking at social data layers to help capture community interest. Also economics and socio-economic piece and cost of practices.
- Two in-person meetings have occurred with two more coming in 2024
- Vast array of datasets that vary in spatial and temporal coverage, leverage strengths of 3 largest datasets IMBCR, E-bird, BBS. Approach we are taking is a dynamic model to estimate spatial variation in pop density and growth rate, get overall growth rate but every pixel gets relative contribution to that growth rate tying in with goal 3 metric of the scorecard. Since a rate can forecast future scenarios for bird population objectives and if/how to meet those goals. Use a scaling factor to correct for detection bias in datasets.
- Hope to provide scaleable resource and ID strategic location for grassland birds across the biome but go down to the county level to help inform work on the ground as partners need/want.

Goal 2 Sarah and Dirac Grassland Assessment Map

- Drivers behind grassland risk map- incorporates both conversion to ag and woody encroachment. Now on version 2.1 of the map. 1.6 million new acres converted, about the same loss for woody encroachment, need to get new map updated with this. Only includes RAP data. Different thresholds for vulnerability from north to south incorporated into the map. Desert shrub mask included in MX. Continue to update with plow print and RAP and improving data for MX. Don't have ag risk assessment for MX but need to develop.
- Working on a story map and do intend to make interactive so can use the data, make more useable, all spatial data is available on-line.
- First biome scale version was associated with RAP- looks at trees, shrubs, perennials, bare ground and first assessment was focused on trees. ID where transitions are playing out with shrubs in southern region, what signal now represents.
- Metrics to measure progress- intact grassland broad umbrella, tend to lose track of ecosystem, this is the broad umbrella that assets like birds, cows, etc. are linked to. Keep intact is green- continue to conserve remaining 186 million acres, prevent conversion and loss to woody species. Seeing progress in each state for the green. Also have goals for addressing woody invasion as well as restoration in the yellow.

- Rangeland information- early warning to woody transitions, plow print and woody encroachment on the main page. County summaries to align with how we work and how things are measured/tracked.
- Phase 2 for the site with web will tap into local collaborations and partnerships and gives ability to harness local information.
- Rangeland vulnerability website will be available by the end of the year

Bill Milton- Community based monitoring program being launched in MT landowners from 5-6 counties. Winnett/ACES looking at metrics ID across the biome. How can transpose onto a community level (5-6 counties and metrics shared with community to help with information transfer). Need neighborhoods scattered across the biome. Hire technicians to do surveys locally. Way for exchange and elevation at the same time.

Goal 1 Social metrics- Community Support

- Social context from world views about grasslands to behaviors that affect grasslands. How integrate social context with grasslands, people and wildlife.
- Group is in development. Need to elevate all voices in grasslands- landowners, Indigenous, farmers, rural communities, marginalized communities
- Whose voices are included and what are they saying, how this group connect the social efforts of other groups
- CEC social science and needs assessment and in-person meetings at conferences
 - Literature review on current social science work in grasslands and is in draft
 - Systematic and iterative delphi process to gather information about conservation challenges, opportunities and social science information needs of practitioners and prioritize these needs to guide efforts.
 - Combined summary of pre-existing CEC funded surveys
- Pathways conference
 - 24 folks attended- good opportunity to meet
 - 40 participants at America's Grassland Conference
 - Pressing concerns- loss of grasslands to lifting all voices
 - Social issues- advancing inclusion, equity and diversity, inequitable distribution of risks, coordinating efforts, employing socio-ecological perspective that values all communities on the land.
- Perceptions of who is involved and who is missing in conversation of grasslands in western paradigm
 - Social dimensions of grasslands included are normal western people versus undeserved, BIPIC, women, environmental justice communities, youth, rural and urban people, community leaders, conservation practitioners
 - Build a community that fosters collaboration across communities and fields of study
 - More discussion on economics of grassland in conservation and costs of conservation and pathways to provide more funding to groups. Also improve communication for coordination and collaboration.
 - Better define our goals and expectations

- Purpose- diverse network to engage diverse communities and perspective to coordinate ss and conservation efforts
- Vision- create diverse coalition across nations and sectors improve equity of funding, set conservation priorities across landscape
- Goals- equitable engage, identify diverse priorities and needs and current research
- Roles – build equitable conservation lens
- Priority issues
- Next steps are to weave scientific and community needs, conversations that reimagine conservation, call in December to further efforts
- **How can this group connect with/support the social efforts of other working groups?**

Questions/Feedback on Roundtable 1

(Xerces) How take model of Sarah and Dirac and bring in local data- intact grassland but quality of grassland and Xerces working with NRCS on eastern range of CGRI. How bring in local goals to this effort?

(Libby) what want people to do to protect grasslands and how be measured? Effort to measure if people are taking action to protect ecosystems. Work group for increasing general support for grasslands and ways to measure progress, voters will decide if grasslands are saved. Dedicated to public support and measurement of that.

Canadian Wildlife Federation- has funding to tackle this. Most Canadians don't know what grasslands are, can't identify and don't know they are threatened. But ranchers and Indigenous people ID as important. When we tell them they are important then they feel people on the land that steward are important. Now look at marketing and to understand (Carolyn Callaghan CWF). Not part of communications working group but should likely join. **(Get Carolyn to present at Comms working Group)**

Link with people on the ground and bring networks together. Identifiable weakness no metrics or performance at biome scale. Good at was local efforts- massive independent networks but not functioning together and big need going forward.

Tammy- key role we can play is having annual scorecard update meeting to help keep people coordinated, connected and helping build better networks

Tammy need to update appendices for scorecard including the assessment map

Tammy review website and communications/messaging to help people navigate- GIS datasets/layers pulled out/linked in one place?

ROUNDTABLE 2

Goal 5 Soil Health-

By 2032 comprehensive soil health will be improved for resilience, productivity...

- Erosion started in mid 1800s. Continued to this day, each dot represents 100,000 tons/year.
- Need reference system for our soil health-how different is our soil health gap. Never cultivated soil is key for reference.

- Organic matter higher for native versus cultivated soil
 - Low organic matter, poor microbiological health
 - Recommendations
 - Reduce tillage
 - Add organic matter
 - Liming
- By 2025 collect data on old growth remnant grasslands, 300 data points and putting into interactive public website next summer. Making good headway
- Collect data from existing remnants- 4 identified, more needed also want nearby ag soils for comparisons
- Soil health working group initiated engage more with grassland roadmap community
- Most labs can do the microbiological metrics. Ranchers want to monitor their soil health to help see change- % bare ground and invasives are metrics they care about (connect Bill and Rebecca?)
- Workshops planned for outreach hubs
 - Northern Hub in Mandan, ND and USDA Northern Great Plains LongTerm Agro-ecosystem research lab
 - Other regions needed
 - Plan to submit soil health proposal to USDA
- Coordinated program of soil health monitoring-use remnants as standard for monitoring the health
- Restoration and soil management no progress yet
- Maintain rates of carbon sequestration at least maintained with goal of 30% increase by 2032.
- Old growth grassland remnants protected within each sub-region of Great Plains
- Canadian Wildlife Federation- Univ of Al Cam is a soil organic specialist and carbon- 300 samples collected- some likely remnant (Make introduction with Rebecca)
- Are there lists of forbs in special remnants area?
- NRCS as good partner they have soil survey data- we are working with soil health institute (Mace with Xerces and western regional soil health lead and web soil health survey data)

Goal 3 Insects Mace and Ray

- Bumble bee atlas for Great Plains (Katie Lamke is endangered species conservation biologist Midwest bumble bee atlas)
- Bumble bee program launched in 2019 in NE now in ND, SD and OK for 2022, planning on WY, CO, UT, NV for 2024
- Baseline datasets, monitor population changes, distribution of species, fill in knowledge gaps
- 31,000 observations 27 species, 1800 surveys by 400 people
- Help with status of SGCN rusty patch (federally endangered) rest are petitioned, western, American, southern plains, yellow-banded, half-back bumble bees
- 80% of visited plants were native in Missouri by bumble bees
- Data to conservation tools- habitat management for bumble bees in NE, guide to bumble bees of NE

- Xerces working with NRCS collecting nutritional data on wildflowers for cattle in MT, Dakotas, NE, KS also culturally relevant plants for Indigenous communities
- A lot of pollinator species will be listed in upcoming years by ESA in the Central Great Plains. Many of them need fire yet are killed by fire. More species get listed the more challenging prescribed burning will be too.
- Need to sample butterfly populations across the Central Grasslands- transects and sampling are easy.
- Easy to compare sites from year to year.
- Common includes orange Sulphur, monarch in decline, others in steep decline
- Dung beetles, harder to ID, species richness similar to bumblebees, lower than butterflies. Plus is gateway invertebrate to ranchers because of role play in the environment.
- Biomass sampling with sweep nets, weigh what you catch or sort contents to the order level (grasshopper/cricket, butterflies/moths, dung beetles)
- Rapid monitoring tool amenable to different sites on the ground- make accessible to everyone in the room particularly to ornithologists. Likely see relations of insect diversity and soil health and productivity- need to help connect dots.
- Carolyn- double down to minimize loss but will still happen. Need plan B build quality of the grasslands to help retain, every lepidoptera has a host plant. Parallel processes. More coming on a rapid assessment.
- ATLAS data for bumble bees, data informing and will not petition to list because have better data. Need to do what we can to get individual species including knowledge of how many there are and monitor to help get to stable.
- Some indicator birds we could target? Insect species they select for? Complicated. Literature indicates birds very flexible to eat variety of insects – 10-15% seeds but rest are insects. Need to measure insects- grasslands management though is critical including disturbance.

Goal 3 Ana Davidson with CNHP

- Prairie dog ecosystem- Homes on the Range project
- Important habitat for pollinators too, more diverse and abundant linked to forbs and bare soil habitat. Grazing increases nutrient quality of plants too. Quality versus quantity forage.
- Work centered on prairie dog ecosystem. Ferret recovery dependent upon.
- ID potential landscapes for grassland conservation
 - Generate BTPD habitat suitability model for prairie dog ecosystem.
 - Incorporate future climate change predictions for BTPD
 - Social cultural mapping too
 - Most suitable overlaps with extant grasslands, 20.9 million ha of suitable grassland habitat
- Priority area analysis ID areas with highest conservation potential- hotspots in southeast CO and central WY.
- ID highest, 10% of landscapes with highest conservation potential and breaking down by ownership type- get to implementation phase to ID 10 communities to try and implement
- Federal 1.4 million ha, state, Indigenous and NGO lands
- Data available on-line and paper published on habitat suitability

- Link conservation planning efforts with those happening with other partners across the region

Next Steps Discussion/Rflection

- Where might increased collaboration happen? What steps need to be taken?
- What do the workgroups need to proceed if we were to develop a Scorecard report?
- How to increase work on water and industry?
- How social component/group can help?
- Longleaf Pine Initiative- more access to direct conservation delivery. Roadmap at a large scale and can't report back easily on how much conservation achieved. Could do as aggregate Range-wide Accomplishment Report as a model for us to show progress around the roadmap reflecting on different scale though.
- Be able to report back on accomplishments and progress. All partners in initiative report back on big buckets/dashboard of work. <https://americaslongleaf.org/media/rbfpf1km/2022-accomplishment-report.pdf>
- All federal agencies around Longleaf Initiative about new 15-year commitment to long leaf celebration happening today. Political and funding ramifications.
- For grasslands- What, where and how much need to define to keep the attention of grasslands going.
- Hard to drive federal and private funding if all our efforts are disparate. Longleaf good model to help us think about how to measure and what to measure and how to report out.
 - *Goal 4 goal on water was skipped today, not internal people to roadmap community stepping up // Goals 6&7 need more industry engagement and momentum*
- How track biome and key assets of biome- birds, butterflies, prairie dogs, soil health. **Dashboard type model**
- ND Meadowlark Initiative is step down of roadmap and when come from grasslands acres protected, restored, enhanced, birds/pollinator response to efforts, social side too. How pull information together across state then roll up is our challenge.
- John- conservation efforts database, how track where everyone is working, securing funding and work with USGS to build grassland database to help capture where collectively working and then are efforts seeing results on the ground- is it having impact/outcomes we want?
- Need more collaboration to roll up metrics and more facilitation and coordination.
- WWF taking soil samples across region as well as pollinator surveys on grassland restoration sites, birds too. Difficult to coordinate all of us.
- Water and industry- they are interested in landscape scale impact, they want to fund it and be recognized for it. If had cohesive report to share, that would be compelling. Industry wants investments in right places and confidence investments are making an impact.
- Nice to expand efforts in MX- Irene happy to help
- Goal 2 and acres restored, enhanced, protected- work with JVs on this
- How improve economics in rural communities to protect grasslands. Restoration might be one of the keys, job potential for areas to help perk government and representatives. Indigenous community health too

- Social connections- Grasslands and You Campaign- build more interest and values of grasslands generally to help with political will. Different stakeholders and how conservation works with them- focus on working with people who own or manage the land.
- Think outside box on grassland conservation- might be a daycare or gas station that matters and sustains the community. Pollution is grassland and environmental issue and connected with conservation. Narrative we use with different groups to build interest and engagement and connections we make- why grasslands matter to these different groups- if try to engage in monitoring aspect of how social side is not just making sure profits side but other ways too.
- Grasslands and You campaign, audience priorities, score card links that will connect with them
- Awareness is a key need around grasslands- value of grasslands and people who rely on grasslands. Pull in department of commerce, governor and connections with ways to make rural communities stronger.
- System so value on grasslands, only way get return is to cultivate it or fence and take every blade of grass. Need to elevate value of grasslands as grasslands themselves.
- Dutch investment into Africa on forests, supplied funding to Indigenous community and farm how they used to, provided them the \$\$, worked so good and \$8 million investment became a fund deal that is now \$30 million. They covered the difference to the bank to change the practices. Folks want biodiversity, higher than ag values, can't get credit for it. Biodiversity market separate from carbon market.
- As restore and connect places can have tourism trails from birds to pollinators to pronghorn.
- Carbon in soil is key for helping grow the plants. More organic matter better water storage and should be \$\$ associated with. Need to link organic matter retention with water retention and measure so can get to economic values.
- Third party verification for biodiversity markets is important. <https://beebettercertified.org/>
- How catalyze more work on water? USGS has thousands of monitoring stations, soil moisture data sets too.
- Follow up with Brian Rickter?
- Hard to find finds working on water at biome level.
- Water is very direct link to communities because of the pollution, nitrates, cancer levels. Toxic algal blooms are an issue too.
- Pollution measure should be included in roadmap metrics.
- Grasslands collect dew every morning, dense stems, they condense water every morning then stored in soil organic matter, not just dependent on rain but condensing the water and make available to the soils.

Next steps:

- Elevate connection/understanding of grasslands- Comms and WWF/Cornell approach
 - This includes education on grasslands
 - Grasslands and You 2.0 building out messaging around the core themes
 - Education and linking efforts from state level to WWF
 - 7 simple steps model like BB3BB campaign
 - Efficiency of grasslands in storing water and carbon
- Sharing policy recommendations across countries and nations

- Framework for scorecard reporting out Ensuring coordination and communications across scorecard
- Policy and comms/marketing to change the paradigm of grasslands and the need to protect them for our future, what grasslands provide from our cultural to ecological and biodiversity markets to sustainable climate.
- Bankers, economists talking to us as well as NFWF on investments in right place on how to support biodiversity. <https://www.bloomlabs.earth/>
 - Also what we can do to educate consumers to drive beef and crop industries
- Forum focused on funding and policy next spring
- Carbon and climate is critical but more to tie biodiversity and nature based solutions. Adam Chambers and others in NRCS.
- Look at pollution as a part of water including access, healthy water, available water- water is life, water is justice
- First draft of scorecard report and needed in next month- what could you contribute and what would you need to give a summary and infographic?

- Key questions/template would help with word count (200-500 words)
- Visuals/charts/infographic- simple conservation status update and take home on connection to native plants (visual support)
 - Process and graphics with outputs
- What reasonable timeline-spring models/maps for birds