

Meeting of the ESA Panel on Vegetation Classification
Notes
March 2 – 4, 2021

Opening Session

Tuesday, March 2

Morning Session

1. Panel member introductions (00:00:00-00:18:32)
2. Agenda and Goals of Meeting (Este) (00:19:54-00:21:45)
 - a. Discussed the meeting agenda and goal is to reconvene on final day with new ideas for how to go forward as a Panel.
 - b. Panel is at a place where the classification is quite mature, there are a lot of things that can be done with it and stuff that can be added; concepts and exciting things we can do going forward. Hope for the next three days: conquer some lingering issues and bring forth new ideas.
3. Sessions Overview: (00:22:11-00:47:25)
 - a. **Nomenclature I (Jack)** (00:22:37)

Session is a quick overview of the nomenclature process: what it's about, why it's needed, and where we're at in the process of revising the nomenclature guide, which is about naming classes within the NVC.
 - b. **Communications (Alexa)** (00:23:15)

Niba and Jasna have worked on revisions to the website and will give an overview of the modifications to navigation and content.
 - c. **LANDFIRE (Alexa)** (00:24:02)

Share the prospectus, where we've identified some questions and possible projects; plus Alexa's notes with some of her questions on the prospectus. LANDFIRE will reconvene on Day 3.
 - d. **Peer Review (Don)** (00:25:07)

Will touch on five year alliance review plan that is about midway. Will look at the state, federal and academic partnerships that link into that review plan; discuss some of the tools available to the editorial board. The work of peer review needs to bring in range wide, comprehensive plot-based analyses to strengthen how we assess quality confidence in our types. Look ahead to 2022 and 2023 when we look for a definitive new edition of NVC partners – looking at both formation tweaks and efforts to solidify the group's alliances.
 - e. **Nomenclature II (Jack)** (00:26:43)

At crossroads within nomenclature group – open with a few key questions to put to the group; wants to hear from other's about how we want nomenclature work to look going forward. Settle on some questions to work through in breakout; come back to main group and do a report out.
 - f. **Communications Working Group (Pat)** (00:28:26)

Following session on Day 1 with web content, will discuss recommendations and clarify key things we want to focus on in the near term.
 - g. **Day 3 Plenary Session (Este)** (00:29:46)

To discuss building scholarly and applied interest in the NVC; talk in more detail about plot-based analyses. What work we want to get done.

- h. **Other items** not on agenda (00:33:36)
- i. Jack – need to work through successional relationships among NVC units. This is applicable to development of state transition models; there are really strong relationships among NVC units within a particular ecosystem type. Takes a bit of thought to make the connection among NVC classes to really describe an ecosystem.
 - ii. Pat – mentioned Global Vegetation Project to consolidate photos. Pat can update on where that is.
 - iii. State transition modeling and dynamics – big topic, possibly not enough time in this meeting to discuss.
 1. **Action Item: Don, Pat and Jack can put together an outline for a meeting in about a month to discuss; needs a multi-hour session for the panel to tackle.** Need half an hour scoping meeting? Next panel meeting would focus on this topic.

4. **Nomenclature Update (Jack)** (1:00:00)
- a. Want to revise the nomenclature guide to help standardize terminology for scientific and common names of type class naming, with an emphasis on a consistent list of terms and definition for the physiognomic terms used to describe those types.
 - b. Half a dozen key documents that provide foundation for the nomenclature work, including the FGDC document, the Ecological Monographs on Standards for associations and alliances of the USNVC, and the draft nomenclature guide.
 - c. Seven step process: (1) Review nomenclature rules; (2) revise nomenclature rules; (3) Review list of terms; (4) Revise nomenclature guide; (5) Review; (6) final edits; (7) present to NVC Panel
 - d. Where are we at – in (3) review list of terms– subpoints of update list of terms, and apply/develop standard definitions. **During this week's working sessions**, tackle how to standardize and define temperature and moisture terms; to include or not colloquial terms.

5. **VegBank Update (Michael Lee)** (1:12:11)
- a. Updated on tasks from year, including:
 - i. user support via emails,
 - ii. assembled 10,800 plots into single database from NE US in prep for upload to VegBank;
 - iii. Worked on Singhurts East Texas plots upload;
 - iv. Discussions and scoping work with NCEAS and others about a REST API redesign and integration with something like R for interface;
 - v. completed NVC plot loading template and loaded ~3,500 plots from Tynan Ramm-Granberg, including the new proposed community types;
 - vi. identified gap in transfer of platform to newer VegBank machine that tidies up our data and stores stats displayed on the home page.
 - vii. Identified misconfiguration in server setup and worked with NCEAS developer to fix
 - viii. Work related to fixes of NJ data that had been attributed to incorrect species
 - ix. Analyzed words used at various levels of names in NVC for consistency with Jack and Don

- x. Finished manuscript on completeness of plot data for Carolinas, Virginia and is published in Proceedings now.
 - b. Questions and Comments: (1:23:20)
 - c. **Este** noted at some point Exec will need to deal with the money issue and figure out what is next and the cost associated with that. Michael noted there is some documentation with scoping figures on things including using R to query the database. Michael will resend the document.
 - 1. **Action Item:** Adrienne will work with Don et al to get these estimates and funded through existing Veg Panel funds. (Note: Funding agreement sent to NatureServe on 3/23)
 - d. **Devon** noted a project that is making a query database for transect data; may be able to do a data sharing agreement to export into a usable format.
 - e. Discussed the upload template and a handbook to go with it. Alexa – a lot of discussion about the template initially was for proposed revisions, so then wouldn't it make more sense for it to be on the Proceedings site. Michael took it to next step so it would feed into VegBank. Este – perhaps reinstate the working group to address these questions. Alexa: Group had been going in circles, but Michael pulled them out. **Perhaps a new purview for the group is to talk about crosswalks to other plot types. Rachelle – California has done some crosswalks. Can be part of the WG at least peripherally. Este – have a meeting for an ad hoc group, also will need scope for costs from NatureServe for implementation. Don, Pat, Devon, Rachelle – meeting sometime in April.**
- 6. Global Vegetation Project through University of Wyoming (Pat)** (1:39:57)
- a. Program goal is to overlay photos with climate information to educate people about patterns of vegetation particularly with regard to patterns of climate.
 - b. Possible opportunity to crowdsource to contribute photos and educate people about vegetation in general and classification in general; if we could link the classification – USNVC.org and Natureserve explorer, people could visualize vegetation and then have a link to descriptive information and be able to visualize that.
 - c. Pat gave demonstration of navigation to show how map and photo explorer works. User enters vegetation type and includes dropdown of global vegetation classification systems.
 - d. Ultimately could send users from usnvc.org directly to photos for that type on this website. Would be on Panel to provide linkage of consistent or periodically updated on an annual basis, listing of types and their codes to enable that sort of functionality of this website.
 - e. Think about possible bulk upload capabilities and also core content we can provide.
 - f. Q from Mario: is there a peer review process to ensure these aren't uploaded to the wrong classification? Pat: Not currently, something for us to consider so does our mechanism need to include a way to ensure things are correctly labelled.
 - g. Don: May be better to extract those parts we trust and curate and make available on the USNVC site. Mario: could also flag or somehow identify plots that have been reviewed versus not.
 - h. Este: Can Pat set up a template and someone on Panel tries using it.
 - i. Este: Question about stability – site is version 0.2. Pat's understanding is they are a recently funded project with a large amount of support; long-term commitment to building this.

- j. After this meeting, think about the priority and timing in engaging people. Subset interested? Este, Scott and Mario, others?
- k. Rachelle noted California has a lot of photos for California tied to plots with alliance and association. Bob: have we talked to iNaturalist? Pat: Have but they weren't keen because of the complexity of taxonomy.

Communications and LANDFIRE Prospectus

Tuesday, March 2

1. **USNVC.org Redesign**
 - a. Alexa, Jasna and Niba walked the panel through website updates. Some discussion of edits to navigation and wording. Noted that we need to check for 508 compliance. Other comments about prior website font being crisper.
 - b. ****specific comments and changes are too numerous to list, check recording and saved chat.****
2. **Further conversation about framing communications** (From working group session)
 - a. who are the key stakeholders we want to reach? Identify those and follow from there with messages. Pat and Adrienne to talk with ESA PAO regarding speaking on behalf of ESA Veg Classification Panel. Adrienne noted that information sharing is always permissible; asks for specific votes or funding allocations is trickier to do while speaking "on behalf of ESA". Once audiences identified, can work on factsheet materials.
3. **Landfire prospectus discussion** (00:35:35)
 - a. Any lingering questions from prior presentation from LANDFIRE team in prior meeting. Don, Alexa and Pat have put out questions that are possibly relevant, but new perspectives are helpful.
 - i. LANDFIRE's objective isn't getting feedback on improving their mapping process but rather how to incorporate and communicate about the USNVC Standard in their products. Will the USNVC meet their needs?
 - ii. NVC wasn't ready to go for early iterations. Now they have two versions of existing vegetation data layer - an ecological systems phase one and the groups based one. So they asked for help from subcommittee, which sent the question to the Panel. In the future they want to say they are consistent or complying with national standard. They could get there by mapping at group level or mapping at ecological systems and cross walking to groups. Asking us to help them evaluate options into future and build the case for investing in that. How do we test USNVC group level map for some of the downstream applications?
 - b. Looking into the future (00:42:57)
 - i. which would you do? Map in parallel or just use one? Basic differences – 500 ecological system based map units and about 300 groups, so you're getting a finer level of detail in system concept, connects to a prior time period that was mapped with that classification. Moving forward – are you just mapping at the group level. We could clarify the pathway forward – what is feasible – what should you be shooting for as it relates to the NVC going forward. Because there's a need to tie things back over time periods. How will we tie together a developing classification with an ongoing mapping process at a national scale.
 - c. Proposed activities: (00:52:52)
 - i. Autokeys – expand on existing autokey to provide higher level context
 - ii. Range Maps: Provide expert review of ranges at the group level
 - iii. State level reviews: Working with state programs that use USNVC to upgrade their list of or crosswalk to USNVC types, allowing states to see their classifications in the context of the USNVC and LANDFIRE maps.
 - iv. Agency Applications: evaluate the application of the group level maps and classification to current agency activities

- v. National Park Service inventory monitoring program – 270 park units have been mapped.
- vi. USFS FIA Program
- d. Mapping and ecological systems relation to USNVC (00:57:00)
 - i. Don and Pat working on updated crosswalk (1:12:00) to be able to utilize all of the accumulated info for ecological systems over last 20 years and apply to the NVC. Este LANDFIRE could be the impetus to set up the step-by-step process to where these become more or less unified classifications.
 - ii. Alexa – Explore where the classifications are similar and different, explore around edges, could we help clarify. Panel can do some activity, but one of the proposed activities were the state level or regional reviews to engage with broader community of ecologists to get concepts refined and understood.
 - iii. Lisa – clarify LANDFIRE not creating maps, creating models. Their charge is national scale, a coarse resolution, best suited at groups level in her opinion.
- e. Closing (1:28:06)
 - i. **Este:** Bringing dynamics info into NVC is important, as is adding ecological information across the board. Make the NVC a repository for all that information. How stable should the group level be to keep it useful to LANDFIRE and other mappers? Alexa: idea is that we write a prospectus to scope out activities that would require support; we're still very much at a conceptual place; Panel members should look at the notes and prospectus document – propose what you would do to look at that question? Is it the right question even? **People should go into document and red line – put in more ideas.**

Peer Review

Wednesday, March 3

1. Five year alliance review plan (2019-2023) (00:03:42)
 - a. Placement of associations within alliances and grounds needs additional QAQC – partly a legacy of moving from USNVC v1 to v2
 - b. Many associations remain undescribed (~15%), making placement within alliances uncertain.
 - c. Not all alliances are currently well-defined, such that they don't contain all of the proper associations, or their concept is too strongly dominance based and not sufficiently ecologically-floristically based
 - d. Better alliance (refined group) concepts will help us build towards plot-based methods: guiding plot compilations and analyses
 - e. Build on existing quality of NVC alliances by conducting this comprehensive expert review to ensure that there is rigorous and conceptually consistent as possible with available info.
 - f. Regarding timeline: first official version of USNVC 2.0 released in 2016, worked on how to do peer review (a major challenge; recognized that peer reviews are best conducted regionally because concepts are regional, but then how to document the outcome of those peer reviews, Alaska was a deep jump to start in – due to timing of landfire, there was funding for those workshops. Set the stage for five year plan)); ramp up years: 2017-2018. For the five year plan, first official year was 2019, second was 2020, third 2021.
 - g. 08:36 Display of map showing status of five year alliance review plan. By 2020 largely complete in Great Lakes and NE. Moving in on Atlantic, great plains, and a number of activities in other states. Currently 26 states are relatively untapped, so we are at a midpoint – how do we deal with those in the interior west? Discussion at 12:36.
 - h. Steps for completing alliance level review:
 - i. Interior West (2021+) Forest and Woodlands: Initial group-level QAQC and flagging of alliance level issues (FIA partnership); Summer-Fall review TBD. Non-forests? TBD.
 - ii. Central Midwest (2021): MO first, coordinate with IL, IN, OH (KY?)
 - iii. Pacific Northwest (2021+): Fall meeting in WA, with OR, ID (in person?)
 - iv. California (2021?): In discussion
 - v. Texas (2022?): In discussion
 - vi. Southeast States (2022-2023): regionally coordinated effort?
 - vii. Hawaii – need partners
2. State federal and academic partnerships: how we can tackle remaining reviews (00:19:34)
 - a. States to USNVC partnership: Direct use or crosswalk?

State classifications can inform the NVC and vice versa. With data management team (Michael Lee, Kristen Snow and ? Harkness, we can produce report for states to tell them whether the association is being tracked in their state; by having state be part of regional review first, we better understand the state needs and makes conversation easier. Can nix or add in associations so they are clear what they are tracking.
 - b. System to USNVC crosswalk (NatureServe, federal partnership): bring together the info on existing vegetation compiled for systems with that of groups. System to group crosswalk largely complete (90% of systems are equal or finer than groups, 10% complex; system to alliance crosswalk is underway

- c. USFS FIA key to USNVC (Group/West), Macrogroup (East)
3. Peer review tools and the USNVC Review Board: (00:27:00)
 - a. Based on recognition that the Panel wanted peer review to be distributed across experts in the country, not all editors are on the panel, so it is based on expertise. Divided editors among major regions and subregions to make sure that it is covered. Encouraged regional editors to find associate editors to work with them. Incomplete list of AE's partly because the work has been on a case by case, as-needed basis.
 - b. Been working on tools. Interior West will be testing the tools as we look at groups and later on, alliances. Challenge will be in terms of thinking about needs in Southeast and forested West. Need a subscription notification service so when documents are posted, you get a notification. Don't have that currently. Proceedings flying below the radar screen of ESA journals, so wouldn't be the same as other publications. Bob Peet: no evidence of a DOI – will we get DOI's? Adrienne as managing editor should get them – will have conversation with ESA Director of Publishing. Is the location stable enough for a doi? Possibly not. Alan: doi is standard for this. One has a doi listed – is this correct?
 - c. Panel encouraged to look at more recent publications – most recent – to what degree do plots tag to alliances, groups, macrogroups. Could be regular report out as we get further along with Veg Bank. Could help determine where plot surveys need to happen. Great plains proceedings is almost done.
4. Range-wide comprehensive analyses: VegBank, EcoObs, +: Bonari et al 2020 paper on Classification of Mediterranean lowland to submontane pine forest vegetation – this is an example of a range wide approach that is now possible through these large databases. An idea of what published versions of alliances may look like down the line.
5. Looking ahead to 2022-2023: (00:39:10)
 - a. the Next Edition of the USNVC (formations, groups-alliances)

NomenclatureWednesday, March 3rd

Note Only the last 30 minutes of the meeting was recorded therefore these notes reflect the last part of the meeting.

1. This session ran from 1pm-3pm with 30 mins dedicated to identifying questions:
 - a. Should temperature and moisture terms be standardized? Withing MG/regions?
 - b. Should colloquial terms be included? (mostly for group and above)
 - c. How to ensure selected terms mesh with terms already in use?

As well as other questions developed by the group to carry on over to breakout groups

2. 60 mins were dedicated to the breakout groups
3. Recommendations for the identifying questions from breakouts:
 - a. Jack (00:00:00)
Some temperature and moisture terms should be nationally standardized across the NVC at the upper levels and within the region or sub-region general terms should be available for relative things (i.e. mesic). This part of the nomenclature task group would assign which terms can be relative or consistent across NVC. Question posed: Can using the relative and specific model (split scale) also be applied to other terms (i.e. geology, mineralogy, geomorphic, other ecological)? To be discussed at a later date.
 - b. Este & Jon (00:10:33)
Since upper-level hierarchies colloquial names and scientific names are often on in the same. Midlevel the names aren't the same but they are related and in sync, therefore ensuring both names are used and in sync would be beneficial. At the lower levels is currently a free-for-all. We strive for greater consistency in group levels and above.
 - c. Robert (00:17:00)
Reach out across disciplines to develop universal and general terminology. We must do our research on how to be leaders in defining this field. Make a step guided document to revisit all references as a starting point and align with them

Communications Working Group

Wednesday, March 3rd

1. The group went through to finalize revisions to the new NVC website, the following are a few of the changes mentioned. For all comments and preview see video session.
 - a. Home page change—remove Classifying, shift to “Your Guide to the Nations Vegetation”
 - b. Add “applications” tab instead of nest it under “Get involved” tab
 - c. Advancing instead of improving or revise
 - d. Bigger—bolder text for accessibility
 - e. Is it 508 compliant? Ensure before publication.
 - f. Sharper Images needed for photos.
 - g. ESA panel website and this website needs a clearer link
 - h. Search bar in the banner/home link in the icon
2. Key partner stakeholders, agency leadership we want to reach out to (00:26:30)
 - a. Refer to communications list for an expansive list of contact targets; for governmental agencies taking it to the next higher level to advocate for the NVC; present to professional organizations.
3. Messages to convey: (00:34:20)
 - a. Sharing video to interest groups at seminars (i.e. USFS, SRM, etc.)
 - b. Work with Scientia (?) to communicate the alignment of the NVC with Biden’s 30 by 30 goal
 - c. Alaska story appealing to federal agencies since it focuses on high quality mapping.
4. Highest priority agency leadership to reach out to: (00:37:47)
 - a. Outside people should reach out to the agencies as they tend to be more receptive to outside voices; talk to senators in hopes for a trickle-down effect
 - b. Develop 1-page fact sheet for communications to government leaders; make it specific to regions (e.g. frame it in context of New Mexico and Colorado collaboration); coming from ESA BUT vet it through public affairs first
 - c. Talk further on a top down approach to asking the government on behalf of the ESA with Adrienne

Closing SessionThursday, March 4th

1. Conversation on classification and dynamics (00:00:02)
 - a. How do we bring the concepts of dynamics more constructively into the classification?
Open conversation about how to do so.
 - i. Pat-assembled a guide to the use of the NVC for BLM which articulated some of the interrelationships of the NVC with other classifications systems, such as LANDFIRE. We can add more examples to this from around the country that gets at the strengths in using NVC classification by giving regional examples to the agencies interested. Some groups would be USFS, Agriculture, East, West, Lisa's work with Wayne National Forest, LANDFIRE, NRCS.
 - ii. Linda shared ideas with the leaders of Soils and Ecology on how we are working on presenting this to the national NCSS meeting on how USFS is partnering with NVC
 - iii. Created a working group to take charge of this problem. They can develop outreach material to send out to outside agencies while present to the panel updates and ideas.
 - b. **New Classification and Dynamics Work Group** (14:00:00)
 - i. Developing a repository for communications and shared documents
 - ii. **Action Item: Adrienne** Set up a shared file program (google drive?) and subset folders for everyone to share; platform to be brought back to the execs at a later date; ensure user friendliness to all agencies (google would not work in this case)
 - iii. Interested Parties: Scott, Devon, Jack, Kyle, Lisa, Pat, Bob, Mario, Don elect a leader
 - iv. Tom-suggests we look at associations website information on dynamics
 - v. Currently NVC is set up well for conservation planning but to really get a buy in from other agencies we have to improve it's usefulness for management.
2. Building Scholarly and Applied Interest in the NVC (00:30:01)
 - a. Plot based analysis to improve classification.
 - i. Don-current peer review will not have much to do with plot-based analysis, it will center on a longer term strategy.
 - b. How do we encourage people to get this plot analysis done? Ideas:
 - i. Speak to how you can engage it as a reference benchmark (ex. Restoration ecology).
 - ii. **Publications:** Develop personal researcher incentives (ex. Make publishing in proceedings have more clout for those who want promotions and tenor) Compile information from proceedings to be entered into a journal with a higher impact factor. As well as link funding to this type of research. Use publications subcommittee to increase NVC and proceedings visibility.
 - iii. Integrating into NEON and LTRs research, but NVC would have to prove that we have sites surrounding that research.
 - iv. Identify the individuals on the panel that are using the plot-based analysis and get their perspective on what the challenges as well as the resources they are using.
 - v. **Develop the mission statement internally before we can start communication planning.**

- vi. Send out a query survey monkey to natural heritage programs to see to what degree they are engaged/limited to contributing.
 - vii. Creating value among state partners to generate funding for these small contributors, making an interactive map and other interactive NVC representations.
 - viii. Special roll for university programs, perhaps they have the flexibility to work across borders.
 - ix. **Action Item:** Elect a point person/new ESA employee to refine & update bibliography on all the work that touches on the NVC, compile list of what panel members are currently doing to address this problem, and reach out to vegetation people/generate interest in this ESA section.
3. Report from Communications (01:06:00)
- a. Went over website and captured notes about how the website redesign looked (See recording/chat for all comments and notes); Adjustments will be made then there will be an opportunity for the entire panel to look at it before it goes live in next panel call.
 - b. Brainstorming about priorities for reaching out to agencies that are making investments into the NVC. Having outside people contact agencies rather than going through an internal route seems as though it would be more effective.
 - c. Framing communication through Biden's 30 by 30 plans aligns well with what NVC is trying to accomplish. State Wildlife Action Plans—connecting beyond state lines, advocating for NVC through NGO's as an effective mechanism to raise awareness.
 - d. Tom-Scientia(?) opportunity for a promotional publication to reach a wide audience for ~\$1000 for a print to get the word out. 3-4 people needed for an interview and they will write the article.
 - e. Developing factsheet for distribution on individual parties (i.e., Lobbying)
 - f. **Action Item:** Get together for a subcommittee meeting before next panel meeting, last two weeks on March
 - g. Tabled for next meeting: email campaign with Niba/Jasna
4. Report from Nomenclature (01:22:48)
- a. To ensure selected terms mesh with terms already in use:
 - i. the NVC naming references (FDGC standard v2 (2008), Jennings et al. 2009, draft key to NVC1, new Braun-Blanquet Nomenclature) diligently and carefully when determining the fate and level of a term.
 - ii. **Action Item:** Nomenclature guide will be updated to reflect the application of these references.
 - iii. Also talk to other working groups outside of NVC (wetlands, etc.) to visit their classification systems.
 - b. Standardizing Moisture/Temperature:
 - i. Climate terms at the higher to mid-levels should be standardized NVC wide.
 - ii. Lower levels (alliance/association) have leeway to include generic terms (moist, mesic) relating to region/subregion.
 - iii. **Action Item:** review appendix A rules and edit to reflect consensus at next nomenclature meeting
 - c. Including colloquial terms in nomenclature guide:
 - i. For the upper three levels colloquial names and Scientifics names are one in the same.
 - ii. The mid-levels diverge a bit between colloquial and scientific.

- iii. Association/alliance level names are often not used or if they are they are “truly colloquial”.
- iv. **Action Item:** Revisit this question again after reviewing Chris Leas documents.
- d. Going forward:
 - i. **Action Item:** Break committee into two member teams to tackle a final list of terms provided by Este. These team will then come back to the committee and present their results.
 - ii. **Action Item:** Bring in a visual to simplify how classification terms relate to each other (physiognomic, environmental, soil etc.) for users.
 - iii. Jack will be stepping down as lead for Nomenclature and leadership will transition to another person in the coming weeks.
- 5. Report from LANDFIRE: (01:42:50)
 - a. Propose regional reviews of the group, maps, and plots; how can we be brought into the process of being integrated with Dons plan by 2022.
 - b. A lot of moving parts have been identified; pick one task and have more frequent meetings where they can work on that task to break it down.
 - c. Overlap in the dynamics group and build that into the prospectus.
 - d. Challenges for mapping the USNVC is not having enough plots across the full range; do an analysis to identify the regions and types that are highly underrepresented in the current plot database.
- 6. Other topics: (01:50:27)
 - a. Possible in person workshops when it is safe to do so.
 - b. Other semi-annual meeting to be pushed back a bit later than the ESA annual meeting since it is virtual this year.
 - c. **Rare species within the classification.** This would be very advantageous for a land managers perspective, we can use them as an indicator for shared habitat restoration. A lot of interest was generated on this topic. Pat and Don will come back on these topics and give a presentation on what they have been doing in NatureServe.

2:00 - 3:30 *Strategic Planning (Exec, Alexa, Don)

No video for this meeting

4:00 – 5:00 ***Landfire Working Group** - identify the high-level methods for each project - including what data/ analysis would be needed and some metric of the level of effort for panel members and the Landfire technical team; draft a budget request

For fun: if you've made it this far, amusing transcriptions from Zoom's closed captioning: veggie bacon, Nachos Alliance, FIFA player plots, auto Kenyans, US Embassy groups, Coven, Waffle world, piano panel, US Tennis, lamb fire, glam fire