

American Society of Adaptation Professionals' Policy Priority #4 Action Plan

Policy Priority #4: Preserve, restore, and manage natural systems for climate resilience

As part of the 2022 goals for the Policy Practice Member-Led Interest Group (PPG MLIG) a series of meetings are planned to address each of the American Society of Adaptation Professionals' (ASAP) policy priorities and develop actionable plans to be more proactive in advocating for climate-related policies.

In October of 2022, PPG heard from Dr. Burton Suedel, a research biologist that works with the Engineering with Nature (EWN) division for Army Corps of Engineers (USACE). He presented to the group how nature-based solutions (NBS) have been an integral component of USACE's project planning team for over 10 years. Their website contains a host of resources including: Nature Based Guidance, Standards, and Evidence to Foster Innovation publications; an extensive library of podcasts, 2 Atlases of projects from both the U.S. and around the world, international guidelines on NBS for Flood Risk Management, NBS guidance documents that provide technical tools (Geography mapper), policy and economic guidance, and more. Dr. Suedel emphasized that the USACE's engages Tribal peoples early and consistently during project proposal, design, and construction phases. He offered a detailed case study from New Mexico and how the Pueblo people's involvement was incorporated into that project. On the policy front, he discussed how their work seeks to drive Federal policy and incorporate environmental justice.

ASAP Policy Priority #4 "Preserve, restore, and manage natural systems for climate resilience"

Nature has intrinsic value for millions of species, provides irreplaceable protection against climate impacts, and provides the food, water, and materials necessary to sustain life, economies, and society. Natural systems are threatened by a myriad of hazards, including climate change. Policies should work to heal and protect nature by:

- Supporting the use of ecosystem best management practices and indigenous land stewardship practices proven to improve ecological integrity, biodiversity, language, health, food security, and livelihoods. This includes setting standards for implementing these practices on public lands and incentives for implementing these practices on private lands.
- Strengthening policies and laws that preserve and restore natural systems, improving nature's ability to adapt to climate change, sequester carbon, and provide for human needs.
- Respectfully engaging with – and deferring to – indigenous land stewards when establishing policies and programs and ensuring policies maintain and restore indigenous rights and authority.

In November of 2022, PPG organized a follow-up peer learning meeting where small groups were asked to discuss the following three questions:

How Can ASAP Encourage Nature Based Solutions (NBS)

1. How can ASAP encourage partnerships with other institutions, scientists, citizens, private sector organizations and other key stakeholders as it relates to becoming more informed advocates of NBS?
2. What can ASAP members do to continue to foster, encourage and adopt federal, state, local policy initiatives to engage in NBS, with a special attention directed towards indigenous and vulnerable communities?

3. How can ASAP continue to educate/clarify the positive effects of a Triple Bottom Line approach (TBL) - social, economic as well as environmental benefits/co benefits – as means to continued adoption and incorporation of NBS in resilience and adaptation planning opportunities?

Below is a summary of the responses from that meeting along with resources compiled from various ASAP members.

1. How can ASAP encourage partnerships with other institutions, scientists, citizens, private sector organizations and key stakeholders as it relates to becoming more informed advocates of NBS?

Federal:

[USAID Natural Climate Solutions](#)
[FEMA Nature Based Solutions](#)
[FEMA Building Community Resilience with Nature Based Solutions](#)
[USACE EWN Dr. Burton Suedel](#)
[DOD \(Norfolk Navy Base/Norfolk, VA\)](#)
[United States Department of Agriculture, Forest Service](#)
[Bureau of Indian Affairs \(BIA\)—Tribal Climate Resilience](#)

Non -profit:

[The Nature Conservancy Natural Climate Solutions](#)
[Sustainable Rivers Program/Nature Conservancy](#)
[American Rivers](#)
[International Economic Development Council](#)

Associations:

[American Society of Civil Engineers](#)
[American Planning Association \(APA\)](#)
[Association of State Floodplain Managers \(ASFPM\)](#)
[Association of State Floodplain Managers \(ASFPM\) Foundation](#)
[Flood Mitigation Industry Association \(FMIA\)](#) Roderick Scott Board Chair/ASAP Member

Other:

University Engineering Schools
Public Lands/Riparian Restoration Programs
Workforce Programs
Supplemental Appropriations
National Adaptation Forum (NAF)
State Emergency Offices
State Adaptation and Resilience Offices
Grant Guideline Groups
[Nicole Bowman](#) can provide tribal groups connections working w/NBS/Resilience
[Virginia Institute of Marine Science Natural and Nature Based Features \(NNBFs\)](#)

What do we need to do to become more informed advocates?

- Need to be “strengthening the fiber” - rather than focusing on the big organizations that are already engaged, to include a much broader constituency (more strings)
- Identify where projects are being implemented (examples to model)
- Look at public lands
 - Riparian restoration
 - Rock restoration
 - Post-fire restoration
- Have conversations w/partnerships: how to scale “within” communities (beyond pilot projects)
- Create/participate in training courses for various levels of organizational management in disaster risk reduction/with Nature Based Solutions (NBS) to drive knowledge including:
 - How to understand the costs/true benefits of NBS, and how to finance NBS
 - How to create engagement with risk management in communities
 - How to develop meaningful connectivity between agencies and folks on the ground
 - Capacity building
 - Protocols for funding design
 - TA and guidebooks
 - Adaptation plans
 - Grant guidelines
 - Tribal led initiatives
 - NBS for decision makers

State Resources

Washington D.C.:

- [“The Value of Green Infrastructure for Urban Climate Adaptation”](#) co-authored by Josh Foster and Angie Hacker, both ASAP members. Although a bit dated (2011), still has sound NBS approaches evaluating different technologies, impact of solution, and compared economic value, as well as measuring scaling up from private parcel to landscape.

California:

- Case study - CalOES working with sub applicants (Haz Mit funding)
- [California Adaptation Plan](#) - prioritizes nature-based solutions.
- [CA: Executive Order N-82-20](#) - The order called for a cohesive strategy to improve management of the state’s diverse landscapes to protect climate-vulnerable communities, safeguard biodiversity, achieve carbon neutrality, improve public health and safety, and expand economic opportunity.
- [CA: \\$100 M to support Tribal-led Initiatives](#)

Hawaii:

- [FEMA: A Powerful Partner for Climate Resilience and Conservation](#)
<https://www.scienceforconservation.org/science-in-action/tnc-and-fema>

Massachusetts:

- **Grant guidelines**
[Massachusetts \(State resilience grants\) – Municipal Vulnerability Program:](#)

South Carolina:

- **Nature Conservancy**
<https://tnc.app.box.com/s/d3vr8taw7ysgper7fux6s8xsaz5wh4o9>
- **Disaster Recovery and Mitigation in SC**
<https://storymaps.arcgis.com/stories/b19b55d8ac7f4a58a943193f2bcf00b4>

2. What can ASAP members do to continue to foster, encourage and adopt federal, state, local policy initiatives to engage in NBS, with a special attention directed towards indigenous and vulnerable communities?

- Advocate for a comprehensive definition of NBS w/parameters to mitigate greenwashing
- Identify inventory of NBS policies already developed by federal agencies and NGOs
- Recommend agencies embrace use of NBS w/gray infrastructure
- Target federal agency decision-makers (FEMA, USACE, OMB) to ensure opportunities for NBS to compete; that legislative intent is clear (WRDA '16 & '20) and followed
- Create a step-by-step procedural guide that can be interconnected between agencies
- Assist to dispel NBS performance outcomes; through research/reports/other
- Monitor/identify activity on funds spent for NBS programs according to orgs/project types
- Engage with FEMA - comment/input opportunities for BRIC, HGMP, etc. – lifting up NBS as part of larger pre-disaster mitigation conversation
 - FEMA is helping highly disadvantaged communities, federally recognized tribes, and Economically Rural Disadvantaged Communities with completing a BCA if their mitigation projects meet all the other programmatic requirements for fiscal year 2022 BRIC and FMA grant cycle
 - FEMA also provides technical assistance on the BCA to all communities to support demonstrating cost-effectiveness of mitigation projects
- ASAP educates key stakeholders how NBS assists in climate risk management strategies
- Identify extensive list of NBS policies/projects in urban areas; create repository for access
- Utilize tools that encourage implementation of policies that focus on multi-benefit approach
- ASAP should help elevate NBS that are working at scale, e.g., [Floodplains by Design program](#) in Washington, The Nature Conservancy, state and local agencies
- Create educational programs/benefits of NBS outcomes for key stakeholders
- Create vulnerable populations ASAP MLIG and support increased racially diverse leadership
- Offer up case studies for modeling: small/local/large scale/indigenous
- Create list of parameters for NBS against green washing/damaging to indigenous/DAC lands
- Seek to mitigate lack of inclusive indigenous stewardship when dealing with public lands; engage local tribal input (USACE EWN) in co-management of projects
 - [Nature-Based Solutions Tribal Program and Council - CA](#)
 - [Office of Intergovernmental Affairs](#)

- [Infrastructure Investment and Jobs Act \(IIJA\) with an environmental lens](#)

Federal

Biden Administration Announces Support for Nature Based Solutions (NBS):

- November 8th, 2022 Biden Announcement on Nature Based Solutions [Biden Announces Roadmap for NBS](#), offered a 43 page [Nature Based Solutions Resource Guide](#) both of which included well -rounded definitions of NBS.
- [Executive Order to Strengthen American’s Forests, Boost Wildfire Resilience, and Combat Global Deforestation](#)
- DOD has topline NBS policies, strategies, and requirements to work with communities adjacent to bases; provide case examples of holistic approaches to NBS implementation
- Clean Water Act - Federal Policy - allows for integrated approach
- [Inflation Reduction Act \(IRA\)](#) for resilience and nature-based solutions - Tribal work

State

- King County Flood Control District Policy on flood hazard planning
- [California Strategic Growth Council \(SGC\)](#)
- [Northwest Climate Conference](#)

3. How can ASAP continue to educate/clarify the positive effects of a Triple Bottom Line approach (TBL) - social, economic as well as environmental benefits/co benefits – as means to continued adoption and incorporation of NBS in resilience and adaptation planning opportunities?

[The Costs of Climate Change, Climate Institute](#)

- Why do we need to put dollar value to make people care?
- In communities that had issues, main concerns are:
 - Safety
 - Livability
 - Identify metrics of success
 - Engage community better
 - Address how climate resilience takes many different forms
- Cost/benefit analysis need to be more fully understood.
 - Assistance can be requested through the BCA helpline by emailing BCHelpline@fema.dhs.gov or calling 855-540-6744. [Hazard Mitigation Assistance Grants | FEMA.gov](#)
 - FEMA Ecosystem Service Value Upgrade
 - https://www.fema.gov/sites/default/files/documents/fema_ecosystem-service-value-updates_2022.pdf
- Continue lifting up case studies, examples, demonstration projects of what works to demystify the idea of NBS and showcase what works

Supplement - Policy Instrument Suggestions

As a means for guiding the November breakout sessions on policy tool suggestions, PPG leaders summarized the following peer reviewed article titled [*"Policy Instruments to Encourage the Adoption of Nature-Based Solutions in Urban Landscapes"*](#). Key points are listed below:

1. **Adoption into Urban Planning** - The success of NBS adoption relies on their integration in to urban planning and policies; need strong evidence base of benefits regarding NBS for adoption and up-scaling processes.

Considerations:

- Urban planning/governance policies play a significant role in how NBS is integrated
- NBS need to be integrated in existing policy mixes, namely in spatial planning
- Policies could range from Federal directives, national/regional adaptation plans and strategies, and local governance

Barriers to adoption include:

- bureaucracy - red tape
- lack of financing model
- private land ownership
- lack of social acceptance
- lack of knowledge
- awareness of technical levels and benefit
- lack of cooperation between sectors
- perceived costs
- social inequalities
- institutional fragmentation
- inadequate regulations

2. **Policy instruments/Governance tools that have the potential to influence NBS adoption** - Legislative (legislative) tools can be formal (e.g., laws, regulations and prohibitions) or informal (e.g., plans, strategies and other visioning and management documents).

Examples include:

- Municipalities to allow access to land and facilitate permitting
- Benchmarks with desired characteristics, operational aspects and monitoring
- Permission of new developments to incentivize creative urban design with green engineering
- Gardens regulated by the municipality, divided into parcels for citizens to use
- Plan more bicycle lanes
- Encourage municipalities' support of green spaces and rivers restoration
- Create of an area in a city center closed to motorized traffic
- Encourage shift from grey infrastructure to green infrastructure
- Use NBS for adapting to sea level rise or increased freshwater flood risks
- Use NBS for stormwater control

3. **Economic or market-based (economic)** – These instruments provide price signals that aim to integrate positive impacts and negative externalities, as well as encourage behavior shifts (e.g., subsidies, charges, levies, taxes, tradable permits and other payment systems).

Examples include:

- Model various insurance company practices that consider favorable rates for NBS (Munich Re)
- Subsidize start-up costs for gardeners and advocate for tax breaks for rooftop farmers
- Encourage water companies to offer economic incentives to consumers; diverting water into their properties/ and support NBS to help in flood control
- Advocate that lease agreements allocate spaces for maintaining gardens; enact small fees to enter
- Support that financial companies invest in NBS and get payments based on flood avoidance
- Subsidize farmers to adopt NBS practices
- Support land acquisition/tax incentives that promote NBS solutions and conservation
- Encourage the creation of small businesses for the maintenance of green spaces

4. **Citizen engagement and information instruments** – These methods include training and education, as well as communication processes (e.g., workshops, surveys, websites, articles, labels and certifications).

Examples include:

- Model other cities/countries that are engaged with NBS
- Ask citizens to identify vacant land; propose citizen engagement to initiate NBS
- Environmental education at all academic/municipality/social/ levels
- Green (not greenwashing) marketing to promote sustainable consumerism

5. **Other tools for consideration:**

Modelling approaches, risk assessments, & land mapping