SOCIOECONOMIC MONITORING OF PUBLIC LANDS MANAGEMENT: A COMPILATION OF MEASURES

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Collaborative groups, community leaders, and others want to increase the socioeconomic impacts of natural resource management. Monitoring can provide data to foster learning and improve socioeconomic conditions. Yet there is currently limited understanding of what and how to monitor.

To address this, we reviewed 12 existing guides or other resources on socioeconomic monitoring in a public lands context. We compiled the measures and methods suggested in each resource, and have indicated which measures are the most commonly found with shading. A bibliography of resources is on the last page of this document.

This compilation is intended to provide a quick reference list of socioeconomic measures and support initial conversations about monitoring. We recommend following these conversations with a structured process to collaboratively choose desired measures, determine feasible methods, conduct baseline assessments, and implement an effective and useful monitoring plan.

More information

For additional resources about monitoring and improving socioeconomic conditions, see: *http://ewp.uoregon.edu/sebenefits.*

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Table 1   Compiled Socioeconomic Monitoring Measures

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Employment and business impacts			
Number of youth, minority group representatives, or people from low-income communities hired to work on projects*, and type of work performed	Community benefit, equity	Contractor reporting form or surveys, worker interviews	2
Number of firms working on projects and total amount for each firm	Distribution of contracting opportunities	Federal Procurement Data System	4
Total wages paid by year, business, or project	Economic output	Contractor reporting form or surveys, certified payroll as required by SCA and DB, worker interviews	3
Percent of contracts issued under best value contracting methods using benefit to local communities in review criteria	Emphasis on quality, community benefit	Document review - contract solicitations	3
Percent of contracts that weighted non-monetary best-value criteria as equal to or more important than prices	Emphasis on quality, community benefit	Document review - contract solicitations	2
Total worker hours supported by Forest Service projects; hours supported by project, month, season, year	Employment	Contractor reporting form or surveys	2
Number of jobs directly supported by Forest Service projects	Job creation/ retention	Contractor reporting form or surveys, human resource records, economic impact modeling	12
Number of jobs/businesses created or supported utilizing nontimber forest products	Job creation/ retention	Forest Service Supervisor's Office, local business surveys	1
Number of jobs indirectly supported by Forest Service projects	Job creation/ retention	Economic multiplier model	2
Percentage of project dollars captured by local firms, and percent increase in the number and amount of work awarded locally over time	Local capture	Federal Procurement Data System	10
Number and percentage of workers and businesses who are local	Local job creation/ retention, business opportunities	Contractor reporting form or surveys, worker interviews	2
Number and dollar value of projects offered by type of work	Opportunity for work	Federal Procurement Data System	5
Total number of jobs that currently exist in community/region's entire restoration sector	Restoration industry capacity	Contractor reporting form or surveys, database of firms and employees	1

Please note that reference to "projects" includes Forest Service service contracts, stewardship contracts and agreements, grants and agreements, timber sales, seasonal employment, and Jobs Corps as applicable.

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Job quality			
Average wage per worker	Job quality	Contractor reporting form or surveys, certified payroll as required by SCA and DB, worker interviews	2
Timeliness of wages paid	Job quality	Contractor reporting form or surveys, worker interviews	1
Number and percentage of workers with above poverty-level wages and permanent employment	Job quality	Contractor reporting form or surveys, certified payroll as required by SCA and DB, worker interviews	1
Percentage of workers receiving benefits or payments in lieu of benefits	Job quality	Contractor reporting form or surveys, worker interviews	4
Percentage of workers receiving promotions or advancements	Job quality	Contractor reporting form or surveys, worker interviews	1
Percentage and number of contracts without job-related injuries or illness that result in lost work time	Job quality	Contractor reporting form or surveys, information from worker compensation insurance claims	2
Number and percentage of contracts that were collaboratively reviewed by the Department of Labor and Forest Service for labor law compliance	Job quality	Department of Labor and/or Forest Service Supervisor's Office	2
Duration of time from start to finish of project	Job quality	Forest Service Supervisor's Office, contractor reporting form or surveys	1
Length of commute to job sites	Job quality	Contractor reporting form or surveys, worker interviews	1
Extent that project workers are able to participate in family and community life	Job quality	Surveys, worker interviews, focus groups	1
Percentage of contracts with structured on-the-job training for new skills or equipment; number of workers receiving training	Job quality, capacity-building	Contractor reporting form or surveys, worker interviews	5
Percentage of contracts with structured training for youth	Job quality, capacity-building	Contractor reporting form or surveys, interviews	3
Number of workers trained to use mechanized equipment	Job quality, capacity-building	Contractor reporting form or surveys, worker interviews	1
Number of local workers trained in prescribed burning	Job quality, capacity-building	Agency records, contractor reporting form or surveys, worker interviews	1
Number of local workers receiving red cards	Job quality, capacity-building	Forest Service Supervisor's Office, contractor reporting form or surveys, worker interviews	1
Number of local residents who receive training in thinning techniques and demonstrate increased skill through field evaluations	Job quality, capacity-building	Contractor reporting form or surveys, worker interviews	1

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Social equity			
Number of tribal businesses and workers participating in project implementation	Business opportunity, equity	Tribal natural resource management departments, Forest Service Supervisor's Office, local business surveys, collaboratively-developed scorecard for self rankings	1
Existence and use of written organizational procedures, rules, and operational guidelines for collaborative project planning and implementation	Capacity-building	Forest Service Supervisor's Office, contractor reporting form or surveys, document review	1
Number of youth trained who continue to use resource management skills from project, and/or find viable employment	Capacity-building	Interviews, focus groups	1
Percent of Forest Service budget spent on financial and technical assistance to public lands communities; percent of those communities that are low capacity	Capacity-building, community benefit	Agency budgets, document review, social vulnerability indices	4
Number and amount of business or community support grants awarded; percent to low capacity communities	Capacity-building, community benefit	Agency budgets, document review, social vulnerability indices	3
Percent and total dollars of wildland fire landowner assistance provided in low-capacity communities	Capacity-building, community benefit	Agency budgets, document review, social vulnerability indices	2
Percent and total dollars of volunteer and state fire assistance provided to low capacity communities	Capacity-building, community benefit	Local fire department and/or state agency records, document review, social vulnerability indices	2
Levels of county investment (also bonds and levies)	Capacity-building, community benefit	Document review, county records, Forest Service Supervisor's Office	1
Number of local organizations awarded grants and agreements and change from last year	Community benefit	Grants and Agreements and Natural Resources Management database	1
Perceived increase in recreation benefits as result of project or program of work	Community benefit	Public survey, interviews, focus groups	1
Availability of medicinal, food, heating, or building materials from the forest	Community benefit	Public survey, interviews, focus groups	3
Number of permits issued for fuel wood	Community benefit	Forest Service Supervisor's Office	1
Access to educational opportunities for public, youth	Community benefit	Public survey, interviews, focus groups	2
Inventories show increase in culturally important and/or marketable NTFPs	Community benefit	Cultural resource, botanical, and other inventories; interviews	1
Extent that traditional forest users' knowledge and practices are incorporated in project or program	Community benefit, equity	Interviews, focus groups, community mapping	1
Percent of total, contract value, and number of contracts set aside for HUB zone certified, small, or otherwise disadvantaged businesses	Community benefit, equity	Document review, Small Business Administration records, Forest Service Supervisor's Office	1

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Percent of national, state, regional, and local wildfire risk assessments that identify low capacity communities	Community benefit, equity	Document review	1
Number of youth, minority group representatives, or people from low-income communities hired to work on a project or over the course of a year; and type of work performed	Community benefit, equity	Contractor reporting form or surveys, worker interviews	2
Collaboration and process			
Percent of community-based wildfire protection and/or restoration plans that result in funding for implementation for projects on public or private lands	Collaboration	Review of spending from National Fire Plan, Title II, and FEMA sources, inventory of CWPP implementation through sources such as the Western Governors Association, Joint Fire Sciences Program, interviews	4
Number and percent of participants who describe project in the same way	Collaboration	Surveys, interviews, focus groups	1
Number and dollar amount of agency projects using stewardship contracting implemented with place-based groups	Collaboration	Federal Procurement Data System, document review, interviews	2
Amount of matching funds and in-kind contributions from non-agency partners for project planning, implementation, and monitoring	Collaboration	Partner records, document review	4
Number and percent of projects that were planned, implemented, and/or monitored collaboratively with full participation from a range of stakeholders		Document review, regional reporting requirements, collaboration effectiveness survey	3
Number and percent of community-based wildfire protection plans completed through a collaborative process	Collaboration	Inventory of CWPP implementation through sources such as the Western Governors Association, Joint Fire Sciences Program, document review	2
Extent that stakeholders previously in conflict are now working together on this project	Collaboration	Interviews, focus groups, historical understanding of group and participant contexts	1
Number of Forest Service units who rank "high" on collaboration scorecard and percent change from last year's ranking	Collaboration	Collaboratively-developed scorecard for self rankings	1
Amount of budget allocated to collaboration at the Forest and district level	Collaboration	Agency budgets	1
Number and percentage of projects that "met rural community needs" as defined by local collaborative group	Collaboration, community benefit	Document review, interviews, focus groups	1
Number or proportion of key interest groups represented in collaborative group or project process	Collaboration, equity	Interviews, focus groups, document review	3
Extent to which traditional forest users are consulted and their input included in process	Collaboration, equity	Interviews, focus groups, document review	

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Extent to which tribal communities are consulted and their input included in process	Collaboration, equity	Interviews, focus groups, document review, collaboratively-developed scorecard for self rankings	2
Extent to which important documents for projects are available in primary language of community	Collaboration, equity, communication	Document review	1
Quality and timeliness of communication among all project partners	Communication	Interviews, focus groups, document review	2
Number of participants who believe there is good communication among collaborative members and with the Forest Service	Communication, equity	Interviews, focus groups	1
Analyzed together: Contract award amount, contract administration costs, project implementation costs, number of staff hours dedicated to the collaborative process	Cost efficiency	Document review	1
Number and percent of commendations for agency personnel who collaborate in their work	Incentives/rewards for collaborating	Annual agency review, regional reporting	1
Percentage of agency personnel involved in collaborative/partnership work who are promoted in place	Incentives/rewards for collaborating	Annual agency review, regional reporting	2
Number of collaborative meetings or other events per year	Participation	Document review, interviews	2
Number of participants who frequently attend meetings and activities	Participation	Document review, interviews	2
Duration of environmental planning process	Process	Document review	1
Levels of local public awareness of, support for restoration activities	Social agreement and support	Public survey, interviews, focus groups	2
Changes in public attitudes toward natural resource management before and after project	Social agreement and support	Public survey, interviews, focus groups	2
Changes in rate and extent of tree poaching from restoration sites	Social agreement and support	Interviews, focus groups, document review	2
Business capacity			
Number of processing facilities utilizing wood products from public lands	Business capacity	Forest Service Supervisor's Office, local business surveys	3
Quantity and diversity of wood products produced	Business capacity	Forest Service Supervisor's Office, local business surveys	3
Number of businesses that were awarded more federal contracts than last year	Business capacity	Interviews, Federal Procurement Data System	1

Measure	Indicator of	Methods proposed in reviewed sources	Number of sources
Amount and value of small diameter material and value-added products processed locally (as percent of total amount)	Business capacity	Forest Service Supervisor's Office, local business surveys	5
Number of local forest products businesses operating at full production capacity	Business capacity	Local business surveys	1
Number of forest-related businesses exploring new market options or market expansion	Business capacity	Local business surveys, interviews	1
Percent of all restoration projects that use mechanized harvesting, skidding, and loading equipment	Business capacity	Forest Service Supervisor's Office, local business surveys	1
Number and types of contracting businesses in the local community	Business capacity, community benefit	Federal Procurement Data System, interviews, survey, partner records	1
Number of employees per firm	Business capacity, work opportunity	Interviews	1
Number of businesses that report no challenges in obtaining skilled and/or trainable workforce	Business capacity, worker capacity	Interviews	1
Amount businesses invested in mechanized equipment	Business health	Contractor reporting form or surveys	3
Number of businesses that felt there was enough work for them last year	Business health	Interviews	1
Number of businesses that consider themselves "better off" than last year	Business health	Interviews	1
Length of time between invoice submittal to agency and payment by agency	Business support	Restoration project record system, agency correspondence database	1
Number of businesses incubated or starting up with business plans	Capacity-building	Contractor reporting form or surveys, interviews	2
Business utilization of technical assistance	Capacity-building	Contractor reporting form or surveys, interviews	1
Level of private sector capital invested and reported access to capital	Capacity-building	Local business and/or bank or other surveys	1
Grants awarded for development of biomass utilization and local energy projects	Capacity-building	Records from agencies and other grantors, Forest Service Supervisor's Office, local business surveys, document review	2

Resources

Derr, T., M. A. Moote, M. Savage, M. Schumann, J. Abrams, L. McCarthy, and K. Lowe. 2005. Handbook Five: Monitoring social and economic effects of forest restoration. USDA Forest Service, Collaborative Restoration Program handbook series. Available at www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_021468.pdf

Egan, A., and V. Estrada-Bustillo. 2011. Socioeconomic indicators for forest restoration projects: a Delphi study. New Mexico Forest and Watershed Restoration Institute. Available at http://www.nmfwri.org/images/stories/pdfs/projects/socioecon_indicatorsweb.pdf

Egan, A. and V. Estrada-Bustillo. In press. Socio-economic indicators for forest restoration projects. Journal of Forestry.

Estrada, V., D. McGrath, E. Krasilovsky, and A. Evans. 2009. Assessing the socioeconomic impacts of New Mexico's collaborative forest restoration program: issues, indicators, and recommendations. Available at http://www.nmfwri.org/images/stories/pdfs/forestry_Restoration_Papers/wp8-socio-eco1-26-2009.pdf

Moote, M. A., and P. Shannon. 2011. Multiparty monitoring and stewardship contracting: a tool for adaptive management. Sustainable Northwest, Stewardship Contracting handbook series. Contact Sustainable Northwest for availability.

Moseley, C. and L. J. Wilson, 2002. A Guidebook for Multiparty Monitoring for Sustainable Natural Resource Management, Ecosystem Workforce Program, University of Oregon, Eugene, OR and the Watershed Research and Training Center, Hayfork, CA. Available at http://ewp.uoregon.edu/resources/community-guidebook/

Moseley, C. and Davis, E.J. 2012. Developing socio-economic performance measures for the Watershed Condition Framework. Ecosystem Workforce Program Working Paper No. 36. University of Oregon, Eugene, Oregon. Available online at http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_36.pdf

National Forest Foundation. 2011. Draft Collaborative Forest Landscape Restoration Program. National Outcomes & Indicators Process & Proposal. July 2011. Available at: www.nationalforests.org/file/download/822

Rural Voices for Conservation Coalition. 2007. Performance Measures Issue Paper. Contact Sustainable Northwest for availability.

Sundstrom, S., C. Moseley, M. Nielsen-Pincus, and E. J. Davis. 2011. Quick guide for monitoring economic impacts of ecosystem restoration and stewardship. Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon. Available at http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/resources/Jobs_Monitoring_Guide.pdf

USDA Forest Service. 2003. Multiparty monitoring and assessment guidelines for community based forest restoration in Southwestern ponderosa pine forests. Southwestern Region. Available at www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_020910.pdf

USDA Forest Service. 2013. CFLR Annual Report Template. Available at: http://www.fs.fed.us/restoration/documents/cflrp/AnnualReportWorkPlan/2013/FM_Annual_Report_Template_Instructions_2013.docx.

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