



NORTH AMERICAN FOREST COMMISSION

THIRTIETH SESSION

Missoula, Montana, USA 9 - 12 September 2019

REPORT OF THE FOREST GENETIC RESOURCES WORKING GROUP

PERIOD: September 2017 – July 2019

1. WORKING GROUP COMPOSITION

Chairperson	Country	Organization
Ramón Silva Flores	Mexico	CONAFOR
Members	Country	Organization
Elizabeth Campbell	Canada	Canadian Forest Service
Sallie Aitken	Canada	University of British Columbia
Tannis Beardmore	Canada	Canadian Forest Service
Jesús Vargas Hernández	Mexico	Colegio de Postgraduados, Texcoco
Fernando Miranda	Mexico	CONAFOR
Cuauhtémoc Saenz Romero	Mexico	Universidad Michoacana de San Nicolás de Hidalgo
Bryce Richardson	USA	USDA Forest Service
Kurt Johnsen	USA	USDA Forest Service
Brad St.Clair	USA	USDA Forest Service

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2. LIST OF ACTIVITIES COMPLETED DURING THE PAST 2 YEARS

Meetings	Location	Date
XXXVIII Meeting of the Forest Genetic Resources Working Group	<i>Provo, Utah</i>	<i>23-27 October 2017</i>
XXXIX Meeting of the Forest Genetic Resources Working Group	<i>Guadalajara</i>	<i>10-15 October 2018</i>

ACTIVITY DESCRIPTION:

- **Task 54: Guidelines for assisted colonization**
 - Recommended reforestation zones for *Abies religiosa* to conserve Monarch butterfly overwintering habitat.
 - Published: Ortiz-Bibian et al 2017. *Silvae Genetica* 66:14-23.
<https://www.degruyter.com/downloadpdf/j/sg.2017.66.issue-1/sg-2017-0003/sg-2017-0003.pdf>
 - A second related paper, of a field experiment of *Abies religiosa* assisted migration using nurse plants, is under review in *Frontiers in Ecology and Evolution*.

- **Task 58: Develop provisional climate-based seed zones for Mexico for contemporary and future climates**
 - Published maps for provisional seed zones of Mexico:
<https://link.springer.com/article/10.1007/s11056-017-9620-6>

3. PLANNED ACTIVITIES FOR THE NEXT 2 YEARS

Activity	Location	Date	Status (ongoing/new)
Task 57: Working Group contributions to the activities toward meeting the FGR goals of the FAO's Global Plan of Action (GPA) for FGR, and the State of the World's FGR initiative in North America	<i>North America</i>		<i>ongoing</i>
Task 59: Seedlot selection tool <i>Translation to Spanish.</i>	<i>North America</i>		<i>ongoing</i>
XL Meeting of the Forest Genetic Resources Working Group	<i>Priest River Exp Forest</i>	<i>6-11 October 2019</i>	<i>new</i>
Task 60: Douglas-fir genomics <i>Identify candidate genes important to environmental adaptation using targeted sequencing.</i>	<i>Canada</i>		<i>ongoing</i>
Task 61: Reforestation guidelines for <i>Abies religiosa</i> and <i>Pinus pseudostrobus</i> .	<i>Mexico</i>		<i>ongoing</i>

<i>Incorporate seed zone information on Abies religiosa into the Seedlot Selection Tool.</i>			
Task 62: Scenario model linking landscape-level adaptation strategies and genetics with other broad-scale processes	<i>North America</i>		<i>ongoing</i>
Task 63: Genecology of red spruce for species restoration <i>Studies underway to understand provenance variation in this species and provide restoration guidelines, ongoing.</i>	<i>Canada/USA</i>		<i>new</i>
Task 64: Assisted migration for conservation and restoration - case studies from Mexico, US and Canada <i>A review paper is planned that includes case studies on assisted migration.</i>	<i>North America</i>		<i>new</i>

4. WORKING GROUP FINANCIAL INVESTMENTS AND/OR NETWORKING

- **Task 59. Seedlot Selection Tool.** Continued in-kind (\$20,000 USD) investments are being made to the Seedlot Selection Tool and to another web-platform (Climate Smart Restoration Tool) that informs seed transfer guidelines.

5. REQUEST FOR FUNDING AND/OR OTHER SUPPORT

- Funding requested for translation of the Seedlot Selection Tool to Spanish, Requested funding \$10,000. *The request provides funds to the web developer to make the translation.*
Funding request for continuing *Abies religiosa* assisted migration field experiments inside the core zone of the Monarch Butterfly Biosphere Reserve. Requested funding: \$4,000 USD.

6. CLOSING REMARKS

The activities of the Forest Genetics Resources Working Group (FGRWG) are driven by policy/forest management needs, linked to regional forest management agencies, and contribute to FAO's global goals for the conservation of forest genetic resources. The Forest Genetics Resources Working Group continues to be very productive, delivering high-quality science and innovative science-to-policy tools supporting sustainable forest management and the conservation of forest genetic resources in North America. Annual face-to-face meetings of the working group maintain the necessary strong collaborations and facilitate the exchange of information on key issues of mutual concern to Canada, Mexico and the United States (e.g., the effects of climate change on forest genetic resources). Face-to-face meetings including all members of the working group and continuity in working group membership are key to its success.

The FGRWG continues its commitment to train Mexican forest technicians; new possibilities for training include Mexican exchanges with Canada/US institutions, such as training CONAFOR technicians in seed bank management. Resources are requested to develop a spanish-translated version of the Seedlot Selection Tool to enable better use of our Spanish speaking colleagues.