**Ecosystem Type: GRASSLANDS**

**Category: Food, Fuel, and Materials**

1. **Materials**

***Supplier*** – Grasslands provide materials that can be used for energy (Hoare, 2002; Tilman, Hill, and Lehman, 2006).

***Driver*** – not applicable

***Demander*** – not applicable

1. **Nutrition**

***Supplier*** – not applicable

***Driver*** -not applicable

***Demander*** - not applicable

1. **Energy**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Mediation of Waste, Toxics, and Other Nuisances**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Mediation of Flows**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Maintenance of Physical, Chemical, and Biological Indicators**

***Supplier*** – Grasslands are good ecosystems to maintain the physical structure of soils and the capture of carbon and nitrogen (Cambardella and Elliott, 1992). Both of these activities support the productivity of plants used for food and fuel grown on grassland soils.

***Driver*** – not applicable

***Demander*** – not applicable

1. **Spiritual, Symbolic, Religious, and Social Experiences**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** – not applicable

1. **Physical and Intellectual Interactions w/ Biota, Ecosystems, and Land/Seascapes**

***Supplier*** – not applicable

***Driver*** – not applicable

***Demander*** - not applicable

**Sources:**

Cambardella, C.A. and Elliott, E.T. (1992) Carbon and Nitrogen Distribution in Aggregates from Cultivated and Native Grassland Soils. *Soil Science Society of America Journal, 57*(4), 1071-1076. DOI: 10.2136/sssaj1993.03615995005700040032x. [abstract only]

Hoare, D. (2002) Biodiversity and performance of grassland ecosystems in communal and commercial farming systems in South Africa. *Biodiversity and the ecosystem approach in agriculture, forestry and fisheries.*(pp. 8-27)Rome, Italy

Tilman, D., Hill, J., and Lehman, C. (2006) Carbon-Negative Biofuels from Low-Input High-Diversity Grassland Biomass. *Science, 314*(5805), 1598-1600. DOI: 10.1126/science.1133306. [abstract only]