A Big Earth Data Platform for Three Poles

**WATER: Dataset of forest structure parameter survey at the fixed sampling plot in the Pailugou watershed and Dayekou watershed foci experiment area (2003)**

1、Description

The main contents of this data set are forest, shrub and grassland sample plot survey data.The fixed samples are located in the drainage ditch valley of qilian mountain and the dayaokou valley where the hydrology observation and test site of the water source conservation forest research institute of gansu province is located. The information of the sample is as follows:  
Number elevation quadrat size longitude latitude surface type  
G1 2715 20 × 20 100 ° 17 '12 "38 ° 33' 29" qinghai spruce forest  
G2 2800 20×36 100°17 '07 "38°33' 27" moss spruce forest  
G3 2840 20×20 100°17 '37 "38°33' 05" moss spruce forest  
G4 2952 20 × 20 100 ° 17 '59 "38 ° 32' 47" qinghai spruce forest  
G5 3015 20 × 20 100 ° 18 '06 "38 ° 32' 42" qinghai spruce forest  
G6 3100 20 × 20 100 ° 18 '13 "38 ° 32' 31" thicket qinghai spruce forest  
G7 3300 23.5 × 20 thickets qinghai spruce forest  
G8 2800 20×20 100°13 '30 "38°33' 29" moss spruce forest  
B1 2700 12.8×25 moss spruce forest  
B2 2800 20×20 100°17 '38 "38°32' 59" moss spruce forest  
B3 2900 20×20 100°17 '59 "38°32' 51" grass spruce forest  
B4 3028 20×20 100°17 '59 "38°32' 39" moss spruce forest  
B5 3097 20×20 100°18 '02 "38°32' 32" moss spruce forest  
B6 3195 20 × 20 100 ° 18 '06 "38 ° 32' 25" qinghai spruce forest  
B7 2762 20 × 20 100 ° 17 '08 "38 ° 33' 21" qinghai spruce forest  
B8 2730 20×20 100°17 '06 "38°33' 27" moss spruce forest  
GM1 3690 5×5 100°18 '02 "38°32' 02" caragana scrub (middle)  
GM2 3690 5×5 100°18 '02 "38°32' 02" caragana scrub (rare)  
GM3 3700 5×5 100°18 '03 "38°32' 03" caragana + jilaliu shrub (dense)  
GM4 3600 5×5 100°18 '10 "38°32' 06" caragana + jila willow thicket (middle)  
GM5 3600 5×5 100°18 '10 "38°32' 06" caragana + jila willow shrub (sparse)  
GM6 3600 5×5 100°18 '10 "38°32' 06" caragana + jila willow thicket (dense)  
GM7 3500 5×5 100°18 '14 "38°32' 08" caragana + jila willow thicket (middle)  
GM8 3500 5×5 100°18 '14 "38°32' 08" caragana + jila willow thicket (dense)  
GM9 3500 5×5 100°18 '14 "38°32' 08" caragana + jila willow thicket (rare)  
GM10 3400 5×5 100°18 '18 "38°32' 12" golden pheasant scrub (rare)  
GM11 3400 5×5 100°18 '18 "38°32' 12" golden pheasant + golden raspberry shrub (dense)  
GM12 3400 5×5 100°18 '18 "38°32' 12" golden pheasant scrub (rare)  
GM13 3300 5 × 5 100 ° 18 '21 "38 ° 32' 21" giraliu thicket  
GM14 3300 5 × 5 100 ° 18 '21 "38 ° 32' 21" caragana + jila shrub  
GM15 3300 5 × 5 100 ° 18 '21 "38 ° 32' 21" caragana + jila shrub  
YC3 2700 1×1 100°17 '14 "38°33' 33" needle thatch field  
YC4 2750 1×1 100°17 '18 "38°33' 32" needle thatch field  
YC5 2800 1×1 100°17 '21 "38°33' 33" needle thatch field  
YC6 2850 1×1 100°17 '25 "38°33' 33" needle thatch field  
YC7 2900 1×1 100°17 '31 "38°33' 32" aster + needle thatch field  
YC8 2950 1×1 100°17 '44 "38°33' 23" needle thatch field  
YC9 2980 1×1 100°17 '48 "38°33' 25" needle thatch field  
The sample geodesic tree data were surveyed from July to August 2007.The survey included:  
1. Basic survey of sample plots in drainage ditch basin:  
A) sample land setting: sample land number, elevation, slope direction, slope position, slope, soil layer thickness, sample land size, longitude and latitude, community type, soil type, operation status, age  
B) survey of each wood in the sample plots: sample plot number, tree number, tree species, tree classification, chest diameter, tree height, undershoot height, crown radius  
2. Soil profile survey record sheet  
Including forest/vegetation status, major tree species, forest age, soil name, surface soil erosion, parent rock and material, drainage conditions, land use history, soil profile (soil layer, moisture, color, texture, structure, root system, gravel content)  
3. Standard ground cover factor  
Standard land area, dominant tree species, stand/vegetation origin, elevation, slope direction, slope position, slope, cutting and utilization method, afforestation land preparation type, survey method, canopy coverage, living ground cover, dead cover cover, litter thickness (undivided strata, semi-decomposed layer, decomposed layer)  
4. Canopy survey:  
5. Draft quadrat (1m×1m) survey record sheet  
Including species name, number, coverage, average height  
6. Results of determination of soil physical properties in source forest of qilian mountain (land sample survey)  
Contains the soil physical properties measurement process (+ wet mud weight aluminum box, aluminum box, soil moisture content, suddenly bulk density, etc.), bringing biomass measurement (total fresh weight of shrub and herb, fresh weight of sample, sample dry weight, etc.), litter dry weight (including mosses) layer and the largest capacity calculation process (of moss and litter thickness, total fresh weight, fresh weight of samples, the dry weight of the sample, soaking for 24 h after heavy, maximum water holding capacity, the largest water depth, the biggest hold water rate, maximum moisture capacity)  
7. Bush sample survey:  
Including species name, number, coverage, average height  
8. Standard sample land setting and questionnaire for each wooden inspection ruler  
Including tree species, tree classification, age, chest diameter, number of height, undershoot height, crown radius  
9. Litter layer survey record sheet  
Including litter (decomposed layer, semi-decomposed layer, decomposed layer) thickness  
10. Update survey records:  
Including tree species, natural regeneration (height <30cm, height 31-50cm, height >51cm), artificial regeneration (height <30cm, height 31-50cm, height >51cm)  
This data set can provide ground measured data for remote sensing inversion of forest structure parameters.

2、Keywords

Theme：Soil,Forest ecosystem,Vegetation,Biomass,Forest,Forests,Soil horizons/profile,Soil water holding capacity  
Discipline：Terrestrial Surface  
Places：Heihe River Basin, Dayekou watershed foci experimental areas, Forest and Hydrology Experimental Areas,   
Time：

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：2.04MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.5765 | - |
| west：100.2158 | - | east：100.30698 |
| - | south：38.4382 | - |

5、Time frame:2004-01-27 00:00:00+00:00--2004-02-26 00:00:00+00:00

6、Reference method

References to data:

WATER: Dataset of forest structure parameter survey at the fixed sampling plot in the Pailugou watershed and Dayekou watershed foci experiment area (2003). A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0245.db2012

References to articles:

7、Supporting project information

The CAS (Chinese Academy of Sciences) Action Plan for West Development Project  
National Program on Key Basic Research Project (973 Program

8、Data resource provider