



*Supplement of*

## **Evaluating the consistency of forest disturbance datasets in continental USA**

**Laura Eifler et al.**

*Correspondence to:* Laura Eifler (laura.eifler@uni-leipzig.de)

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## S1 Tables

**Table S1.** DCA codes in IDS of different agent categories. The first two digits of the code describe the category code (10, 11, 12), the next three digits (here all 0) describe the agent code, which is normally more detailed (e.g. 001, 002), which was not needed for this study, except for *Drought* and *Wind*.

DCA_CODE	DCA_NAME	New Name	New Code
10000	Miscellaneous insects and allies	Insects	1
11000	Bark beetles	Insects	1
12000	Defoliator	Insects	1
14000	Sucking insects	Insects	1
15000	Boring insects	Insects	1
16000	Seed/cone/flower/fruit insects	Insects	1
17000	Gallmaker insects	Insects	1
18000	Predatory insects	Insects	1
19000	General diseases	Disease	2
20000	Biotic damage	Other biotic	7
21000	Root/butt disease	Disease	2
22000	Stem decays/cankers	Disease	2
23000	Parasitic/epiphytic plants	Other biotic	7
24000	Decline complexes/dieback	Other biotic	7
25000	Foliage and shoot diseases	Disease	2
26000	Stem rust	Disease	2
27000	Broom rust	Disease	2
28000	Boring insects - shoot and twig	Insects	1
29000	Root feeding insects	Insects	1
30000	Fire	Fire	3
41000	Wild animals	Other biotic	7
42000	Domestic animals	Other biotic	7
50000	Abiotic damage	Other abiotic	8
50003	Drought	Drought	4
50013	Wind	Wind	5
60000	Competition	Other abiotic	8
70000	Human activities	Other abiotic	8
80000	Multi-damage (insect/disease)	Multi damage	6
90000	Unknown	Other	9

**Table S2.** Columns of interest of FIA condition data.

Column name	Meaning
PLT_CN	Plot sequence number
COUNTYCD	County Code
FORTYPCD	Forest type code
COND_STATUS_CD	Condition status code
DSTRBCD1	Disturbance code 1
DSTRBYR1	Disturbance year 1
DSTRBCD2	Disturbance code 2
DSTRBYR2	Disturbance year 2
DSTRBCD3	Disturbance code 3
DSTRBYR3	Disturbance year 3
OWNCD	Owner class code
OWNGRPCD	Owner group code
FORINDCD	Private owner industrial status code

**Table S3.** Columns of interest of FIA plot data.

Column name	Meaning
CN	Sequence number
INVYR	Inventory year
STATECD	State code
PLOT	Plot number
MEASYEAR	Measurement year
MEASMON	Measurement month
MEASDAY	Measurement day
LAT	Latitude
LON	Longitude

**Table S4.** Columns of interest of FIA tree data.

Column name	Meaning
PLT_CN	Plot sequence number
MORTYR	Mortality year
AGENTCD	Cause of death (agent) code
DAMAGE_AGENT_CD1	Damage agent code 1
DAMAGE_AGENT_CD2	Damage agent code 2
DAMTYP1	Damage type 1
DAMSEV1	Damage severity 1
DAMLOC2	Damage location 2
DAMTYP2	Damage type 2
DAMSEV2	Damage severity 2

**Table S5.** Agent coding mapping for ranges FIA agent categories based on IDS new coding system. The ranges of FIA codes are based on the information of agent code (*AGENTCD*) and disturbance code (*DSTRBCD1*).

Agent FIA Name	Agent FIA Code (Range)	New Name	New Code
No visible disturbance	0	No data	0
Insect	10 to 19	Insects	1
Disease	20 to 29	Disease	2
Fire	30 to 39	Fire	3
Animal	40 to 49	Other biotic	7
Weather	50 to 59, except 52 and 54	Other abiotic	8
Wind	52	Wind	5
Drought	54	Drought	4
Vegetation (suppression, competition)	60 to 69	Other	9
Unknown (other)	70 to 79	Other	9
Silvicultural or landcleaning activity	80 to 89	Other	9
Other	$\geq 90$	Other	9

**Table S6.** Agent coding mapping for NAFD agent categories based on the new coding system.

NAFD Type Name	NAFD Type Code	New Name	New Code	Explanation
Removal	101	Other	9	All mechanical clearings within six years of time series observations
Fire	102	Fire	3	Fire
Other	103	Other	9	-
Stress	104	Other biotic	7	Events resulting in slow gradual loss of forest canopy, including insect damage, drought and disease
Wind	105	Wind	5	Wind
Conversion	107	Other	9	Forest clearing followed by confirmed transition to a different land cover or use