



DENR ADMINISTRATIVE ORDER
No. 2012- 05

AUG 28 2012

SUBJECT : GUIDELINES ON SURVEILLANCE, MONITORING, PREVENTION, CONTROL AND REPORTING OF FOREST PESTS

Pursuant to Sec. 37 of Presidential Decree No. 705, as amended, otherwise known as the "Revised Forestry Code of the Philippines", Executive Order No. 192 otherwise known as the "Reorganization Act of the Department of Environment and Natural Resources" and Executive Order No. 26 ordering and declaring the implementation of a National Greening Program (NGP) as a government priority, the following guidelines on surveillance, monitoring, prevention, control and reporting of forest pests are hereby promulgated and issued for compliance of all concerned.

Section 1. Basic Policy. It is the policy of the State to ensure the sustainable use, development, management and conservation of the country's forest resources not only for the present but also for the future generations. The government, through the Department of Environment and Natural Resources (DENR), shall promote the use of high quality planting materials in the establishment of tree plantations, tree farms, agro-forestry and other forestation activities for biodiversity conservation and sustainable production, and supply of wood and other forest products in the country.

Section 2. Scope and Coverage. The guidelines shall cover the surveillance, monitoring, prevention, control and reporting of pests in natural forests, plantations, agro-forestry areas, mining areas, protected areas, ancestral lands and private forest lands.

Section 3. Definition of Terms. For the purpose of this Order, the following shall be defined:

- a. Action - the measures being applied to address the pest infestation whether preventive, remedial, stop-gap or long term.
- b. Ancestral land - land, subject to property rights within the ancestral domain already existing and/or vested upon the effectivity of Republic Act No. 8371 or the Indigenous Peoples' Rights Act of 1997, occupied, possessed and utilized by individuals, families, clans who are members of the ICCs/IPs since time immemorial, by themselves or through their predecessors-in-interest, under claim of individual or traditional group ownership, continuously to the present except when interrupted by war, force majeure, deceit, stealth, or as a consequence of government projects and other voluntary dealings entered into by the government and private individuals/corporations, including, but not limited to, residential lots, rice terraces or paddies, private forests, swidden farms and tree lots.



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- c. Agro-forestry - the sustainable management of land, which increases its productivity by properly combining agricultural crops with forest crops simultaneously or sequentially over time through the application of management practices which are compatible with the local climate, topography and slope.
- d. Disease - a condition in which any part of a living organism is abnormal; the condition of a plant that is being continuously affected by some factors that interfere with the normal activity of the plant's cells or organs. Injury, in contrast, results from a momentary damage.
- e. Mining areas - portion of the contract area identified by the contractor for purposes of development, mining utilization and sites for support facilities or in the immediate vicinity of the mining operation.
- f. Monitoring - activities or research instruments that aim to detect change in the behavior, appearance, condition or performance of natural forests, forest plantations, agro-forestry areas, "reclaimed" (rehabilitated) mining "lands" (areas) and private forest lands, that may be attributable to pests and diseases.
- g. Natural Forest - a forest where majority of the stands are formed from natural regeneration, timber stand improvement (TSI) and assisted natural regeneration (ANR). It may, therefore, comprise other fast-growing forest tree species introduced for the purpose of rehabilitation and reforestation. (This definition recognizes the employment of appropriate silvicultural treatments in the management of natural forest).
- h. Plantation - a man-made forest stand established by planting or seeding for the purpose of land rehabilitation, protection and timber production.
- i. Private Forest Land - land titled to a person or juridical entity by virtue of statutory and/or customary laws developed or managed for timber production. Forest stands may be naturally occurring or planted.
- j. Pests - insects, fungi and other microorganisms capable of infesting and destroying the forests.
- k. Reporting - the process of documenting results of investigation or observation and submission of the documents duly signed by the Forest Pest Surveillance and Monitoring Officer to the official unit.
- l. Surveillance - the observation and monitoring of the progress or development of the pest disease.

Section 4. Forest Pest Surveillance, Monitoring and Reporting. The following procedures shall be observed in forest pest surveillance, monitoring and reporting:

- 4.1 Every Community Environment and Natural Resources Office (CENRO) with forest(s) under its jurisdiction shall designate a Forest Guard who shall concurrently act as Forest Pest Surveillance and Monitoring Officer (FPSMO).

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- 4.2 The FPSMO shall conduct regular forest inspection activities in his/her area of jurisdiction and coordinate with the forest tenure holder, private plantation owner, protected area supervisor, or indigenous people (IP) group, and local communities.
- 4.3 Forest Pest Surveillance and Monitoring shall be included under the Forest Protection activities of the concerned CENROs and reporting shall be regular with or without infestation. When there is no forest pest incidence monitored, the FPSMO will just note "No Observed Forest Pest Incidence" in his/her regular area patrol report.
- 4.4 In cases of actual infestation, the FPSMO shall conduct an initial evaluation of the nature and extent of forest pest infestation. He/She shall fill up the *DENR Forest Pest Surveillance Field Form* in Appendix 1a and prepare and submit a memorandum letter to the CENRO within two (2) working days after reporting back to the office, containing a brief narrative report of the infestation event.
- 4.5 The CENRO shall forward the report including his/her own recommendation to the Regional Executive Director (RED), copy furnished to the Provincial Environment and Natural Resources Officer (PENRO).
- 4.6 The RED, through channels, shall alert the Directors of the Ecosystems Research and Development Bureau (ERDB) and the Forest Management Bureau (FMB), and in case the infestation covers, or there is a threat to protected areas, the Protected Areas and Wildlife Bureau (PAWB), who shall recommend to the Supervising Undersecretary the creation of an ad hoc Forest Pest Assessment Team to verify, assist and recommend to the RED the appropriate control measures.
- 4.7 Upon the recommendation of the Ad Hoc Forest Pest Assessment Team, subject to the usual government regulations and the approval of higher authorities, the RED may engage into contract with private entities for the control of forest pest in his area of jurisdiction.
- 4.8 The Forest Pest Assessment Team shall inform the RED of the most appropriate time to re-assess the infestation after the forest pest control activities and shall conduct re-evaluation of the area as to the success or failure of the control measures. The Team may recommend to the RED the necessary further course of action to totally eliminate the pest and prevent similar incidence.
- 4.9 When infestations occur in forests occupied by IPs, close coordination shall be held by the CENRO with their leaders as to what specific courses of action shall be undertaken and shall be covered by an appropriate Memorandum of Agreement (MOA) between the DENR and the IP leader.

Section 5. Other Responsibilities of the Concerned Bureaus

- 5.1 The ERDB, FMB and PAWB, in coordination with the other DENR Offices and stakeholders, shall continue to devise ways and means in forest pest surveillance, monitoring, detection, prevention, control and reporting.



- 5.2 The ERDB shall take the lead in research, data base development and the conduct of capacity building and IEC activities on the biology of forest pests, infestations, prevention and control for DENR Central and field personnel, selected stakeholders, including members of indigenous communities.
- 5.3 The FMB shall lead the monitoring and evaluation of forest pest surveillance, prevention, control and reporting activities and the conduct of capacity building and IEC activities on silvicultural strategies towards the prevention and control of forest pests.
- 5.4 The PAWB shall lead the conduct of capacity building and IEC activities in forest pest prevention and control as a strategy in protected area management.
- 5.5 In the conduct of capacity building, the Bureaus may invite resource persons in and out of the DENR who have expertise in Forest Entomology, Forest Pathology, Integrated Pest Management, and related fields. Resource persons from outside DENR are entitled to honoraria subject to the usual accounting and auditing rules and regulations.

Section 6. Funding. The funds for the institutionalization of the forest pest surveillance, monitoring, prevention, control, training and capacity building, and other associated activities shall be charged to the regular appropriations specifically programmed or allotted to the forest protection funds of the DENR Regional Offices.

Section 7. Repealing Clause. All orders and issuances inconsistent herewith are hereby amended or revoked.

Section 8. Effectivity. This Order shall take effect immediately and shall remain in force unless repealed/revoked in writing.


RAMON J.P. PAJE
Secretary



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DENR FOREST PESTS SURVEILLANCE FIELD FORM

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| SURVEILLANCE OFFICER NAME _____ OFFICE _____ DATE _____ VALIDATED BY: _____ | REGION _____ PROVINCE _____ MUNICIPALITY _____ BARANGAY _____ SITIO _____ LOGGING AREA, If applicable: _____ COMPARTMENT, If applicable: _____ GPS READING _____ | AREA AFFECTED _____ AREA INFESTED _____ DISTRIBUTION <input type="checkbox"/> SINGLE TREE <input type="checkbox"/> SCATTERED TREES <input type="checkbox"/> PATCHES <input type="checkbox"/> WIDESPREAD TOPOGRAPHY <input type="checkbox"/> RIDGES <input type="checkbox"/> SLOPES <input type="checkbox"/> FLATS <input type="checkbox"/> DIRECTIONAL SEVERITY <input type="checkbox"/> MINOR (1-10%) <input type="checkbox"/> MODERATE (11-20%) <input type="checkbox"/> SEVERE (21-100%) INCIDENCE _____% METHOD <input type="checkbox"/> ESTIMATED <input type="checkbox"/> COUNTED |
| TYPE <input type="checkbox"/> PLANTATION <input type="checkbox"/> NATURAL FOREST <input type="checkbox"/> NURSERY <input type="checkbox"/> COMMUNITY FOREST <input type="checkbox"/> ROADSIDE TREES <input type="checkbox"/> PORTS <input type="checkbox"/> OTHERS _____ | OWNERSHIP <input type="checkbox"/> CORPORATION <input type="checkbox"/> PUBLIC FOREST <input type="checkbox"/> PRIVATE <input type="checkbox"/> PARK OWNER/SUPERVISOR _____ | |
| TREE SPECIES COMMON NAME _____ SCI. NAME _____ AGE _____ SPACING _____ | PARTS AFFECTED <input type="checkbox"/> LEAVES <input type="checkbox"/> FLOWER <input type="checkbox"/> BUD <input type="checkbox"/> SEED <input type="checkbox"/> SHOOT <input type="checkbox"/> BARK <input type="checkbox"/> TWIG <input type="checkbox"/> SAPWOOD <input type="checkbox"/> BRANCH <input type="checkbox"/> HEARTWOOD <input type="checkbox"/> LEADER <input type="checkbox"/> STEM <input type="checkbox"/> UPPER <input type="checkbox"/> BUTT <input type="checkbox"/> MIDDLE <input type="checkbox"/> ROOT COLLAR <input type="checkbox"/> LOWER <input type="checkbox"/> ROOT <input type="checkbox"/> DIRECTIONAL | |
| GROWTH STAGE <input type="checkbox"/> SEEDLING <input type="checkbox"/> SAPLING <input type="checkbox"/> POLE <input type="checkbox"/> MATURE <input type="checkbox"/> OVERMATURE | DAMAGE(Insect pests) <input type="checkbox"/> PUNCTURE <input type="checkbox"/> MINING <input type="checkbox"/> SKELETONIZING <input type="checkbox"/> CHEWING <input type="checkbox"/> DEFOLIATION <input type="checkbox"/> RING BARKING <input type="checkbox"/> BORING W/ FRASS <input type="checkbox"/> SAP SUCKING <input type="checkbox"/> FOLDING <input type="checkbox"/> BLOTCHING <input type="checkbox"/> ROLLING <input type="checkbox"/> SEVERING <input type="checkbox"/> TUNNELING <input type="checkbox"/> OTHERS _____ | SYMPTOMS & SIGNS (Diseases) <input type="checkbox"/> SPOT <input type="checkbox"/> BLIGHT <input type="checkbox"/> SCORCH <input type="checkbox"/> CANKER <input type="checkbox"/> DIEBACK <input type="checkbox"/> STUNTING <input type="checkbox"/> CHLOROSIS <input type="checkbox"/> RESINOSIS <input type="checkbox"/> MOSAIC/MOTTLING <input type="checkbox"/> CURLING <input type="checkbox"/> ROSETTING <input type="checkbox"/> GALL <input type="checkbox"/> SCAB <input type="checkbox"/> WILTING <input type="checkbox"/> DECAY/CAVITY <input type="checkbox"/> OTHERS _____ <input type="checkbox"/> FUNGAL MYCELIUM <input type="checkbox"/> SPORES <input type="checkbox"/> FRUITING BODY/IES <input type="checkbox"/> BACTERIAL OOZE <input type="checkbox"/> SCLEROTIAL BODIES <input type="checkbox"/> NEMATODES <input type="checkbox"/> PARASITIC PLANTS <input type="checkbox"/> OTHERS _____ TYPE OF DECAY <input type="checkbox"/> ACTIVE <input type="checkbox"/> PASSIVE |
| STATUS <input type="checkbox"/> LIVING <input type="checkbox"/> STANDING DEAD <input type="checkbox"/> FALLEN <input type="checkbox"/> OTHERS _____ <input type="checkbox"/> DOMINANT <input type="checkbox"/> CODOMINANT <input type="checkbox"/> SUPPRESSED <input type="checkbox"/> UNDERSTORY | SUSPECTED CAUSE <input type="checkbox"/> INSECT <input type="checkbox"/> FUNGUS <input type="checkbox"/> ANIMAL <input type="checkbox"/> PARASITIC PLANT <input type="checkbox"/> NEMATODES <input type="checkbox"/> OTHERS _____ | OTHER STRESS FACTORS <input type="checkbox"/> WIND <input type="checkbox"/> LIGHTNING <input type="checkbox"/> INSOLATION <input type="checkbox"/> FIRE <input type="checkbox"/> WATER LOGGING <input type="checkbox"/> SOIL COMPACTION <input type="checkbox"/> NUTRIENT <input type="checkbox"/> SALT <input type="checkbox"/> HERBICIDE <input type="checkbox"/> WEEDS <input type="checkbox"/> DROUGHT <input type="checkbox"/> OTHERS _____ |
| PURPOSE OF RAISING THE SPECIES _____ SOIL ANALYSES <input type="checkbox"/> PHYSICAL <input type="checkbox"/> CHEMICAL <input type="checkbox"/> NONE CHEM APPLIED/AMT & FREQ. <input type="checkbox"/> LIME <input type="checkbox"/> FERTILIZER <input type="checkbox"/> FUNGICIDE <input type="checkbox"/> INSECTICIDE <input type="checkbox"/> OTHERS _____ | GENERAL ASSESSMENT OF THE SITUATION: _____ | |

PENRO/CENRO OFFICER / SIGNATURE

APPENDIX 1b

**GUIDE TO TECHNICAL TERMS IN THE DENR FOREST PESTS
SURVEILLANCE FIELD FORM**

| TECHNICAL TERMS | DESCRIPTION |
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| Active decay | The destruction or decomposition of organic matter/plant organ/tissues as a result of microbial action. A state of rotting evidenced by the causal agent as in sporophores of fungus or bacterial ooze. |
| Bacteria | Tiny unicellular organisms with dimensions ranging from 0.2 to 5.0 microns (1 micron = 0.001mm). They are not individually visible under a hand lens but can be seen with the aid of a compound microscope. Bacterial infections are sometimes characterized by appearance of slimy ooze and foul door. |
| Blight | A general term used to describe the shriveling and death of some or all of the foliage and young shoots of a plant. |
| Blotching | A dark patch on a leaf caused by a minute insect larvae "mining" or burrowing between the upper and lower epidermis. |
| Boring | Damage caused by wood, bark and shoot feeding insects whose well developed mouth parts allow them to tunnel in or chew woody tissue. |
| Butt-rot | A rot characteristically confined to the base or lower bole of a tree. |
| Canker | Localized necrotic lesion primarily of the dark and cambium. |
| Chewing | Damage caused by insects and vertebrate pests that eat the leaf tissue. |
| Chlorosis | Characterized by yellowing often associated with tissues surrounding a necrotic area. |
| Curling | Distorting, flutting and puffing of a leaf due to unequal development of its sides. |
| Decay | Deterioration caused by wood destroying fungi. |
| Defoliation | Damage caused by certain insects that completely strip trees and other plants of their leaves. |
| Dieback | Progressive dying of stems and branches from the tip downward. |

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| Folding | Refers to the wrapping, enclosing or enveloping as in a fold or folds by an insect. |
| Frass | A mixture of sawdust produced by the insect in the process of tunnel building under the bark of trees and insect excrement that is usually expelled out through holes. |
| Fruiting bodies | A complex fungus structure that contains or bears spores from which they are disseminated. The most important types are apothecia, perithecia, conidiospores, coremia, sporangia, pycnia or spermagonia, aecia, pycnidia, acervuli, and sperodochia. Mushrooms of the Basidiomycetes and Ascomycetes are fruiting bodies of perfect stage. |
| Gall | A pronounced swelling or outgrowth on a woody plant caused by a certain fungi, bacteria, nematodes or insects. |
| Mining | Damage caused by larvae of certain insects that consume interval leaf tissue while leaving the thin, papery skin of the epidermis intact. |
| Mosaic | Development of irregular, light and dark green blotches on the leaves. |
| Mycelium | A mass of hyphae which forms the vegetative filamentous body of a fungus. |
| Nematodes | A round worm having tubular body with a mouth and well-developed alimentary canal. The nematodes that cause plant disease pierce the cells of a plant with a stylet and suck up the juices. |
| Parasitic plants | Plants that vary in degree of dependence on other plants but all of them produce chlorophyll and are capable of manufacturing food from carbon dioxide and water although dependent on the host plant for certain minerals and organic substances. |
| Passive decay | Inactive state of rotting without the causal agent. |
| Resinosis | Resin exudates coming out from the injured/infested portion of the plants/trees. |
| Rolling | Refers to coiling round and round by itself. |
| Rosetting | Internodes of shoots or branches fail to elongate normally, making the leaves crowded into clusters. |
| Sap sucking | Damage caused by sap feeding insects having sucking mouth parts that allow them to draw liquid from the host plant. |
| Scab | Abnormal thickening of the outer layer of tissues resulting from one local irritation. |

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| Severing | Refers to the detaching, dividing or cutting action by an insect. |
| Sclerotial bodies | Small seed-like structures of density aggregated mycelium with a thick covering, color varying from brown to dark or black. |
| Scorch | A superficial burn usually caused by the sun on foliage causing browning/discoloration. |
| Signs | One of the two principal indications of a diseased plant. Signs are evidences and structures that the causal organism produced – usually either the vegetative or fruiting structures. The other indications of disease are certain symptoms expressed by the host plant such as the production of epicormic shoots. |
| Skeletonizing | Damage caused by the larvae of certain lepidopterans insects (moths) that consume all of the leaf tissue except the lattice of veins. |
| Spore | Reproductive structure of the fungi and other lower plants. |
| Spot | A definite diseased area usually on the leaves; a limited lesion usually sunken on the leaves. |
| Stunting | Abnormal dwarfing of the plant either caused by pest or mineral/nutritional deficiency. |
| Symptom | The external and internal evidences of the disturbance in the normal development and function of a host plant. |
| Tunneling | Damage caused by wood boring insect feeding in the cambial region beneath the bark or in shoots, or deeply into the sapwood and heartwood. |
| Wilting | The drooping of foliage from water deficiency, commonly as a result of the blocking of the conduction system of the plant. |