Gozdarski Inštitut Slovenije
Večna pot 2, Ljubljana

Izvajanje aktivnosti v povezavi z ocenami ponorov toplogrednih plinov za področje »Raba tal, spremembe rabe tal in gozdarstvo« (LULUCF)

Končno poročilo

19. januar 2012

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR
AGENCIJA REPUBLIKE SLOVENIJE ZA OKOLJE

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Končno poročilo

Pogodba št.: 2523-11-100336

Naročnik : **Republika Slovenija, Ministrstvo za okolje in prostor, Agencija Republike Slovenije za okolje**

Poročilo so pripravili člani projektne skupine na Gozdarskem inštitutu Slovenije:
Laura Žižek Kulovec, Daniel Žlindra, Dr. Milan Kobal, Dr. Primož Simončič

Ljubljana, 19. januar 2012

podatkov po naštetih zbiralnikov je običajno vključen v aktivnosti nacionalne inventure gozdov (NFI), za katere je značilno, da so izvedene v kratkem času (1 oz. 2 letih) na sistematični način, ki omogoča ocene odstopanj in ponovljivost. Nekatere kategorije izračuna nacionalnih bilanc emisij in ponorov TGP za področje LULUCF trenutno niso vključene v celovito bilanco; (npr. skladiščenje ogljika v lesnih proizvodih in na deponijah, ki bodo glede na mednarodno usklajevanje stališč verjetno vključeni v obdobje po letu 2012).

V letu 2010 se je začelo obvezno poročanje za Kjotski protokol za aktivnosti iz člena 3.3 in izbrane aktivnosti iz člena 3.4. Vsebinsko poročilo zajema tekstovni del, ki je vključen kot dodatek k NIR in samostojni tabelarični del. Poročevalske preglednice in vsebina tekstovnega dela poročila je predpisana v Odločbi 15/CP.10. Pri pripravi izračunov je potrebno upoštevati navodila iz Odločbe 16/CMP.1, ki potrjuje splošne principe, definicije in pravila ter zavezuje podpisnice Kjotskega protokola, da svoje izračune pripravijo v skladu z IPCC GPG 2003 za LULUCF.

V Uradnem listu RS št. 79/2010 je ARSO MOP objavil javni razpis za izdajo javnega pooblastila za opravljanje dejavnosti stanja okolja na področju tal, vode in zraka. Predmet javnega razpisa je bila izdaja javnega pooblastila (za dobo pet let) za izvajanje monitoringa ponorov in emisij toplogrednih plinov zaradi rabe tal, spremembe rabe tal in gozdarstva v skladu z določbami Pravilnika o monitoringu ponorov in emisij toplogrednih plinov zaradi rabe tal, spremembe rabe tal in gozdarstva. Gozdarski inštitut Slovenije je 18.11.2010 prejel Javno pooblastilo za opravljanje dejavnosti stanja okolja na področju, tal vode in zraka za: Izvajanje monitoringa ponorov in emisij toplogrednih plinov zaradi rabe tal, spremembe rabe tal in gozdarstva.

Z javnim pooblastilom je Gozdarski inštitut Slovenije pridobil pooblastilo za izvajanje monitoringa toplogrednih plinov zaradi rabe tal, spremembe rabe tal in gozdarstva. Pooblastilo velja za obdobje petih let, od 1. januarja 2011.

1.2 NALOGE IN CILJI

Naloga projekta je priprava podatkov za področje LULUCF, ki ustrezajo merilom iz Smernic dobre prakse (Intergovernmental Panel on Climate Change (IPCC), Good Practice Guidance (GPG 2003) for Land Use, Land-use Change and Forestry (LULUCF)) iz leta 2003.

Glavne naloge v letu 2011 so:

- Pridobiti izboljšane in nove podatke za letno nacionalno poročilo o emisijah in ponorih TGP (NIR) za sektor LULUCF. Podatke potrebujemo za redna poročanja za UNFCCC in za obvezno poročanje za Kjotski protokol. Poudarek bo na izboljšanju kakovosti podatkov in dopolnjevanje manjkajočih podatkov na osnovi poročil mednarodnih revizorjev.

- Pripraviti Nacionalno poročila za aktivnosti iz člena 3.3 in izbrane aktivnosti iz člena 3.4. Kjotskega protokola.

- Pripraviti letno Nacionalno poročilo za sektor LULUCF za UNFCCC s podatki za l. 2010.

- Sodelovanje pri revizijah in pojasnjevanju NIR, vsebin poročil in podatkov.

- Mednarodne in domače aktivnosti: sodelovanje na delavnicah, srečanjih poročevalcev sektorja LULUCF, gozdarstvo v okviru EU in UNFCCC aktivnosti v povezavi s poročanjem o

ponorih ter sodelovanje s tujimi strokovnjaki s področja LULUCF sektorja gozdarstvo članic EU ter JRC (obisk delavnice, ki se navezujejo na vsebine poročanja, bilateralna sodelovanja v tujini in sodelovanja v Sloveniji).

1.3 PRIČAKOVANI REZULTATI

Pričakovani rezultati za področje »Rabe tal, spremembe rabe tal in gozdarstva« v povezavi z obvezami Kjoto protokola so:

- Priprava poročil po vseh vsebinskih sklopih glede na časovni načrt Izvajanje aktivnosti v povezavi z ocenami ponorov toplogrednih plinov za področje "Raba tal, sprememba rabe tal in gozdarstvo" (LULUCF)

- Priprava končnega poročila glede preverjanja izbranega modela za spremljanje sprememb zalog ogljika v gozdnih tleh na osnovi ponovitev manjšega števila domačih raziskav gozdnih tal v preteklosti.

- Pojasnitev izračunov v času revizije UNFCCC (priprava odgovorov na SA Report, priprava odgovorov na vprašanja revizorjev, priprava odgovorov na poročilo revizorjev o potencialnih problemih evidenc LULUCF in KP-LULUCF sektorja, pregled osnutka revizorskega poročila in priprava pripomb).

- Izboljšava izračunov za obdobje 1986-2009 in priprava podatkov in izračun emisij in ponorov za leto 2010 za NIR 2012.

- Priprava delovne verzije tekstovnega dela poročila (NIR, 1. del, poglavje 7 - LULUCF in NIR, 2. del, poglavje 11 – KP-LULUCF) in podatkov za CRF preglednice.

1.4 ČASOVNA DINAMIKA NALOGE

Naloga 1: Gozdna inventura
Cilji:
- priprava na inventuro 2012
- izvedba testne inventure 2011

Aktivnosti:
- pregled lege ploskev na mreži 4 x 4 km glede na ažurno dejansko karto rabe tal, uvrstitev negozdnih ploskev v kategorije rabe tal (avg-nov)
- testna inventura 2011 na 16 x 16 km v omejenem obsegu (avg-sep)
- priprava inventure 2012 (sep-dec)

Naloga 2: Zaloge ogljika in njihove spremembe v tleh in opadu
Cilji:
- delna pridobitev izboljšanih podatkov o vsebnosti in zalogah ogljika (C) v tleh in opadu s poudarkom na gozdnih tleh ter za ostale rabe tal, za izboljšanje poročila UNFCCC in Kjoto (3.3 in 3.4).

Aktivnosti:

- Dokončati analize ogljika v talnih vzorcih mreže 8x8 km in določiti vsebnosti ogljika (po potrebi tudi karbonatov), dušika, teksture in gostote tal (do 30cm globine) za mineralni in organski del tal (C v »opadu« oz. litter po GPG 2003). (avg-dec)
- Preverjanja modelov za spremljanje sprememb zalog ogljika v gozdnih tleh na osnovi primerjave današnjih in preteklih raziskav gozdnih tal:
- modeliranje sprememb zalog C v tleh in (opadu) z modelom Yasso07 in drugimi dostopnimi modeli; preverjanje in uporaba modelov za ugotavljanje/oceno emisij TGP iz tal po spremembi rabe tal (npr. po deforestaciji - odločitev konservativna ali pa raba sodobnih modelov), (avg-okt);
- določitev zalog C za rabe tal, ki niso bile vključene v dosedanjih poročilih (npr. za l. 2008), priprava ustreznih nadgradenj glede na revizorske pripombe iz septembra in oktobra 2010 in končno revizorsko poročilo za leto 2010. (avg-dec)

Naloga 3: Izboljšanje podatkov

Cilji:

- izboljšanje podatkov, preverjanje in izboljšava faktorjev ter metod za poročanje;

Aktivnosti:

- osnovne gostote (R) za dve drevesni vrsti (avg-dec);

Naloga 4: priprava poročila za l. 2010 in sodelovanje pri revizijah NIR

Cilji:

- izdelava NIR 2012 – z dodatnim poglavjem za KP (LULUCF)
- ostala poročila

Aktivnosti:

- delno izboljšanje poglavij QA/QC za vse rabe tal (sep-dec);
- delno izboljšanje oz. izračun negotovosti in konsistentnosti časovnih vrst (sep-dec);
- sodelovanje pri revizijah Sekretarijata UNFCCC (sep-dec): ta aktivnost zajema pripravo odgovorov na pisna vprašanja revizorjev, kadar se revizija opravlja na daljavo, ter pripravo prezentacij in ustno zagovarjanje izračunov v primeru, da bo revizija potekala v Sloveniji,
- priprava vseh potrebnih podatkov in potrebnih izboljšav le teh, glede na zaključke revizije iz leta 2010 – pripraviti je potrebno vse podatke za vnos v CRF preglednice in izdelati kratko poročilo v angleščini, v katerem je potrebno navesti poglavitne spremembe v metodologiji ali uporabljenih podatkih, ki so bile vzrokih za rekalkulacije ter ostale izboljšave emisijskih evidenc za področje LULUCF in KP-LULUCF (rok do 31.12.2011);
- koordinacija vseh aktivnosti na GIS.

2. POROČILO

Zaradi vsakoletnega zamujanja in zavlačevanja podpisa dogovora med MOP oz. ARSO ter Gozdarskim inštitutom Slovenije glede izvajanja aktivnosti na področju letnega poročanja za sektor LULUCF/AFOLU, se nadaljujejo tako kadrovske kot organizacijske težave inštituta za zagotavljanje strokovnosti sodelavcev (strokovnjaki morajo zaradi zavlačevanja in zamujanja podpisa pogodb za naloge OP TGP zapustiti Inštitut, ki je financiran sicer iz javnih sredstev vendar projektno, kar pomeni da nima pavšalno zagotovljenih sredstev za zaposlene).

Na Gozdarskem inštitutu Slovenije je bila sicer osnovana projektna skupina GIS LULUCF/AFOLU, v katero so vključeni dr. Primož Simončič, dr. Andrej Kobler, dr. Milan Kobal, dr. Marko Kovač, Daniel Žlindra, Laura Žižek Kulovec in sodelavci Laboratorija za gozdno ekologijo (LGE) ter občasno dr. Nike Krajnc, mag. Mitja Piškur. Zaradi problemov glede sklenite dogovora ter zaradi bolezni oz. zapustitve inštituta so bili zgoraj našteti lahko manj časa vključeni v delo te naloge kot pa je bilo predvideno v začetku leta.

Poročilo je strukturirano glede na naloge opredeljene v vsebini projektne naloge.

Naloga 1: Gozdna inventura

V okviru naloge je potekal pregled rabe tal na ploskvah 4 x 4km nacionalne mreže v skladu s pripravo načrta inventure za potrebe KP v letu 2012. Na sistematični mreži se je preverilo, kakšna je trenutna raba in morebitne spremembe glede na leto 2007. Ker se izvajajo testne aktivnosti v poletnem času, t.j. od konca junija do začetka septembra, je podpis pogodbe in možnost vključitve teh aktivnosti v nalogo odpadla!

Naloga 2: Zaloge ogljika in njihove spremembe v tleh in opadu

V laboratoriju za gozdno ekologijo (LGE) Gozdarskega inštituta Slovenije (GIS) so bile izvedene in zaključene analize vzorcev tal s 147 ploskev nacionalne mreže 8 x 8 km. V vzorcih so bile narejene naslednje analize: določitev vlažnosti tal, vsebnost skupnega in mineralnega ogljika v tleh, določena je bila tekstura; določanje deleža gline, finega in grobega melja, peska ($pH_{0,01M\ CaCl2}$, humus, C, $CaCO_3$, C_{min}, C_{org}, N, C_{org}/N, S). Podatki so shranjeni v podatkovni bazi GIS in so bili po validaciji uporabljeni za izračun zalog ogljika v mineralnem delu tal in v opadu. Opis vzorčenja in izračuni zalog ogljika v opadu in v mineralnem delu tal so v prilogah (glej priloge). Ravno pridobivanje podatkov in izračun zalog ogljika v opadu in mineralnem delu tal, je bila osrednja tematika letošnje delavnice poročevalcev za LULUCF, ki je potekala v novembru v Bruslju.

Naloga 3: Izboljšanje podatkov – osnovne gostote drevesnih vrst (R)

Sodelavec, ki je strokovnjak na tem področju, je bil v času trajanja projektne naloge odsoten zaradi bolezni.

Naloga 4: priprava poročila za l. 2010 in sodelovanje pri revizijah NIR

Sodelovanje pri reviziji Sekretariata UNFCCC in priprava odgovorov na pisna vprašanja revizorjev je bilo opravljeno, kljub temu, da v tistem obdobju financiranje ni potekalo.

Pregledani so bili izračuni za podkategorijo 'Forest land remaining forest land'. Izračuni so bili nadalje razdeljeni na posamezne elemente v izračunih za lažje spremljanje sprememb rezultatov pri rekalkulacijah (podpoglavja v NIR: Category-specific recalculations). Zbrani so bili podatki o površinah požarov za manjkajoči leti (1993,1994) in ugotovljeno je bilo, da za leti 1986 in 1987 ni na voljo podatkov o površinah in vzrokih požarov v naravi. Pridobljeni so bili podatki o površinah požarov za leto 2010. Ugotovljeno je bilo, da je potrebno za izračun emisij, ki nastanejo zaradi požarov, uporabiti zgolj površino, ki je v poročilih Zavoda za gozdove Slovenije označena pod kategorijo 1. Gozdovi in grmišča (52,06 ha za leto 2010) in ne skupne vsote površin (120,53 ha za leto 2010), kjer so vključene tudi druge površine (travniki, pašniki,...). Rekalkulacije so bile upoštevane pri izračunih emisij, nastalih zaradi požarov (Biomass burning, Forest land remaining forest land). Izdelani so bili izračuni emisij (CO_2, CO, CH_4, NO_x, N_2O in HMHC) za celotno obdobje (1986-2010).

Potekale so priprave na delavnico »Technical workshop on LULUCF reporting under the Kyoto Protocol«, v organizaciji Združenega raziskovalnega centra Evropske komisije (JRC EC) ter udeležba na delavnici, ki je potekala 21. novembra 2011 v Bruslju. Na delavnici »*Technical workshop on LULUCF issues under the Kjoto Protocol*« so bile predstavljene najpogostejše težave, ki so se pojavile pri poročanju držav članic. Glavna poudarka delavnice sta bila: poročanje o zalogi ogljika v tleh in predstavitve načinov za poročanje o površinah različnih rab tal in spremljanja njihovih sprememb (več v prilogah). Na spletnih straneh JRC so na voljo tudi predstavitve s posvetovanja: http://afoludata.jrc.ec.europa.eu/index.php/public_area/LULUCF_workshop_2011.

Izdelani so bili izračuni za emisije v letu 2010 in vneseni v program CRF Reporter.

V okviru mednarodnega sodelovanja smo se povezali s predstavniki JRC v Ispri (Italija), z namenom strokovnega sodelovanja glede priprave končne verzije NIR.

V decembru 2011 smo na Gozdarskem inštitutu Slovenije organizirali problemsko delavnico, na kateri smo obravnavali problematiko evidenc površin za posamezne rabe tal. Na delavnici so bili prisotni kolegi, ki niso več zaposleni na GIS so pa v preteklosti sodelovali oz. bili odgovorni za pripravo letnih NIR.

3. PRILOGE

- ZALOGE OGLJIKA V OPADU IN MINERALNEM DEU TAL – ZALOGOVNIKA »LITTER« IN »ORGANIC CARBON IN MINERAL SOILS« S PLOSKEV 8 × 8 KM MREŽE SLOVENIJE
- Gradiva s delavnice »*Technical workshop on LULUCF issues under the Kjoto Protocol*«
- CRF preglednice: KP LULUCF za 2010
- CRF preglednice: LULUCF za 2010

Opis vzorčenja tal ter izračuni zalog organskega ogljika v gozdnih tleh na 8 x 8 km mreži

VZORČENJE TAL NA 8 × 8 KILOMETRSKI MREŽI VELIKOPROSTORSKEGA POPISA POŠKODOVANOSTI GOZDOV IN GOZDNIH EKOSISTEMOV V LETU 2007

1. VZORČENJE TAL NA 8 × 8 KM MREŽI

Nacionalni izračuni emisij in ponorov toplogrednih plinov (CO_2 je najpomembnejši **TGP**) so kompleksni in dolgotrajni. Mednarodna navodila za izračun ponorov in emisij TGP »Smernice dobre prakse« (IPCC 2003, 2006) za področje »**Rabe tal, spremembe rabe tal in gozdarstvo**« (LULUCF oz. AFOLU) vključujejo metode za izračun ponorov po petih t. i. »pool-ih« oz. zbiralnikih:

1. sprememb lesnih zalog in ponorov za nadzemno lesno maso,
2. podzemno lesno maso,
3. **organski ogljik vezan v mineralnem delu tal,**
4. neživo lesno maso (les odmrlega drevja, ki leži na gozdnih tleh) in
5. **opad.**

V okviru nacionalne inventure za potrebe Kjotskega protokola in drugih mednarodnih obvez Slovenije, ki izhajajo iz konvencij, obvezujočih protokolov etc., se bo v l. 2007 na 8 × 8 km mreži **izvedlo vzorčenje gozdnih tal in opada z namenom določitve vsebnosti organskega ogljika v gozdnih tleh (v t /ha).** Delo bodo izvedli popisovalci iz ZGS in delavci GIS, vsaki na približno 100 ploskvah. Na ZGS se bo oblikovalo sedem oz. osem ekip (po 2 člana), ki bodo zadolžene za odvzem talnih vzorcev na 8 × 8km mreži v naslednjih OE: Bled + Kranj, Tolmin, Postojna, Kočevje, Novo Mesto, Maribor + Murska Sobota in Slovenj Gradec + Nazarje. Delavci GIS bodo izvedli vzorčenje v OE Ljubljana, Brežice, Celje in Sežana ter na ploskvah, za katere se bodo dogovorili s popisovalci ZGS (kontaktne osebe na GIS so napisane na koncu dokumenta).

1.1. Osnovne definicije (prirejeno po SUŠIN, J. 1983)

Tla so naravna tvorba na površju zemeljske skorje, ki je nastala in se razvijala pod vplivom tlotvornih dejavnikov; matične podlage, klime, organizmov, reliefa in časa. Za gozdna tla so značilni ohranjeni talni horizonti.

Talni profil je navpični presek tal skozi vse talne horizonte do matične podlage.

Talni horizont je talni površini bolj ali manj vzporedna plast, nastala v procesu nastanka in razvoja tal. Od sosednjega talnega horizonta tal se razlikuje npr. po barvi, teksturi, strukturi, stopnji kislostih in/ali še po drugih (morfoloških, fizikalnih, kemičnih, bioloških) lastnostih.

Horizonte označimo s simboli, ki so sestavljeni iz ene velike črke (npr.: O, T, A, E, G), nekateri pa še z eno podpisano malo črko (npr.: $(B)_v$, B_t, B_h) ali dvema podpisanima malima črkama ($(B)_{rz}$, B_{fe}).

Pregled talnih horizontov in podhorizontov je prikazan v Prilogi 5.

Razvrščanje tal

Pedološka klasifikacija razvršča tla na osnovi njihovega nastanka, razvoja, zgradbe in značilnih lastnosti v oddeke, razrede, tipe, podtipe, različice in oblike.

V oddelek **avtomorfnih tal** naših gozdov (ta tla so nastala in se razvijala samo pod vplivom padavinske vode; prehajanje vode skozi njih je prosto, brez zastajanja) razvrščamo šest razredov tal: nerazvita, humusno akumulativna, kambična, izprana, antropogena in tehnogena tla. **Hidromorfna tla** so zaradi talne, površinske in/ali poplavne vode trajno do začasno mokra tla, ki imajo izražene znake prekomernega navlaževanja. Razvrščamo jih v pet razredov: nerazvita hidromorfna tla, psevdoglejna, oglejena, šotna in antropogena hidromorfna tla.

Ključ za določevanje talnih razredov in tipov slovenske razvrstitve gozdnih tal je prikazan v Prilogi 6.

1.2. Predvidena dela za vzorčenje tal v letu 2007

Za vzorčenje tal se predvideva za izvedbo pedoloških del na terenu vsaj dva vzorčevalca, ki bosta v letu 2007 na vsakem od za vzorčenje tal izbranih KPP 4 × 4 km mreže:

- izbrala tri vzorčevalna mesta, od središča KPP ploskve (kratica pomeni Koncentrična Permanentna Ploskev) oddaljena 10 metrov (±1 m) v smereh jug (J), severovzhod (SV), severozahod (SZ);
- izvedla vzorčenje organskega dela tal z lesenim okvirjem in mineralnega dela tal z valjasto sondo na vsakem od treh vzorčevalnih mest;
- dostavila v plastične vrečke nabrane in ustrezno označene talne vzorce v laboratorij gozdarskega inštituta in ustrezno izpolnjen obrazec s podatki o KPP, vzorčevalnih mestih in talnih vzorcih.

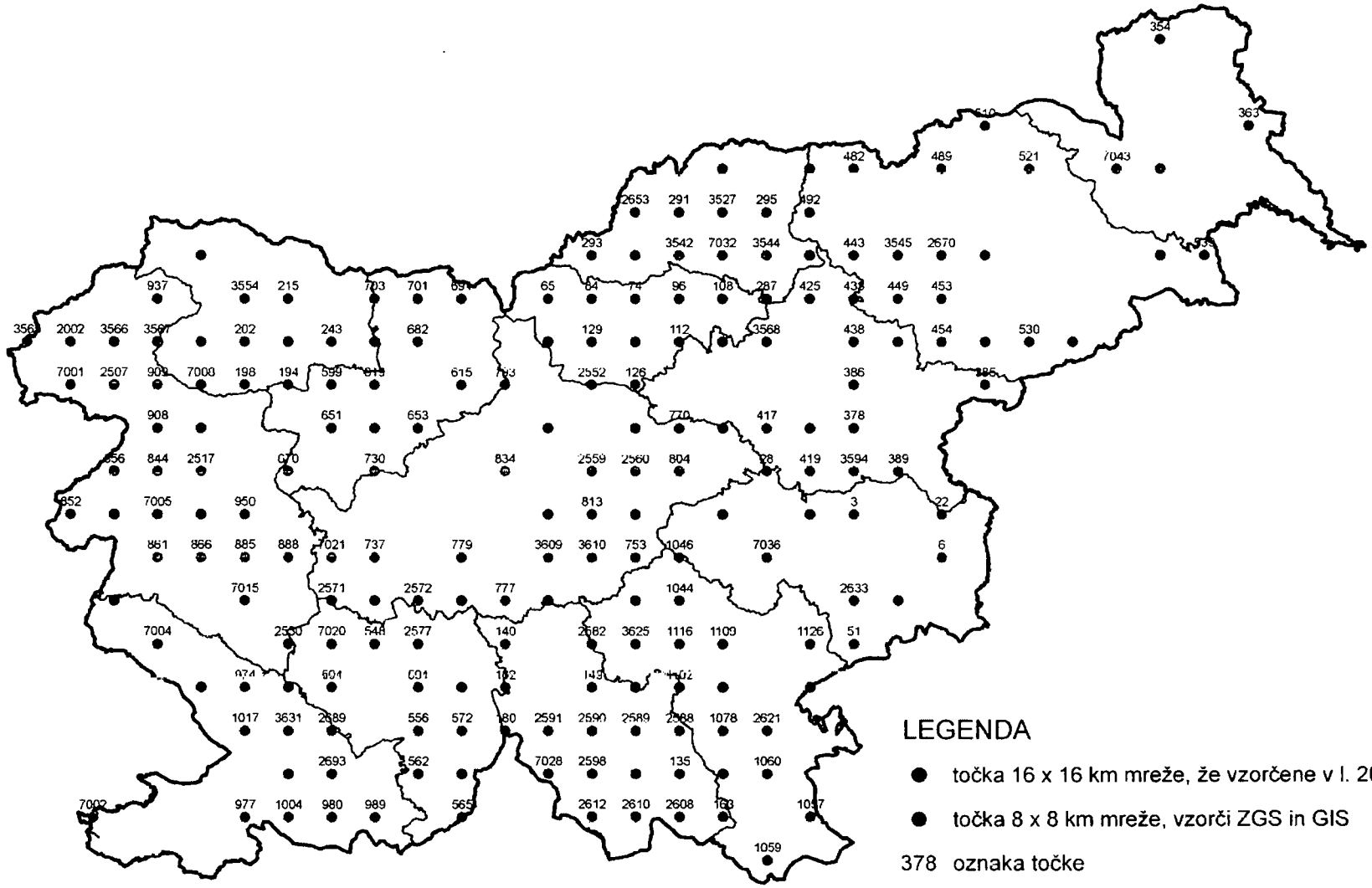
1.3. Potrebna oprema za vzorčenje tal v letu 2007

Na terenu je za vzorčenje tal potrebno imeti:

- obrazec za vpis podatkov o KPP, vzorčevalnih mestih in talnih vzorcih;
- kompas, s katerim določimo smeri vzorčevalnih mest;
- merilni trak ali vrvico za izmero 10-metrske oddaljenosti vzorčevalnih mest od središča KPP;
- meter za izmero globin tal in debelin talnih plasti;
- ošiljeno metrsko kovinsko palico z ročajem za sondiranje globine tal;
- 3 lesene okvirje z notranjo velikostjo 25 cm x 25 cm za odvzem vzorcev organskega dela tal;
- 12 aluminijastih klinov za pritrditev lesenih okvirjev v tla;
- plastičen pladenj za nabiranje vzorcev organskega dela tal (ki ga označujemo z O);
- nož, vrtne škarje, lopatka, rokavice, s katerimi se jemlje talne vzorce;
- jeklena cevasta sonda (dolžine 80 cm, premera 7 cm) za odvzem vzorcev mineralnega dela tal (ki ga označujemo z M), ročaj za izvlek ter glava sonde, po kateri se tolče z batom;
- lesen bat za zabijanje cevaste sonde v tla (vsaj dan pred uporabo ga je treba namočiti v vodo, da se napne in kovinska obroča ne padata z njegove glave);

- vedro za nabiranje vzorcev mineralnega dela tal;
- krpa za čiščenje sonde;
- flomastri (polstena peresa) za označevanje globin 10 cm in 40 cm na valjasti sondi;
- pisala (svinčniki z radirko in/ali kemični svinčniki) in obrazec za vpis podatkov o datumu vzorčenja, o KPP ploskvi, o vzorčevalnih mestih in o odvzetih talnih vzorcih;
- plastične vrečke (3 in 5-kilogramske, oz. 15 + 3 (rezerva) komadov za eno KPP ploskev) za talne vzorce;
- etikete za vpis podatkov o datumu vzorčenja, o KPP ploskvi, o vzorčevalnih mestih in o odvzetih talnih vzorcih, ki jih prilepimo na plastične vrečke z vzorci (v deževnem vremenu pa jih raje položimo v vrečke, na vrečke pa napišemo podatke o vzorcih s flomastrom);
- mrežaste vreče za prenos vrečk s talnimi vzorci.

Točke 8 x 8 km mreže, izbrane za vzorčenje tal v letu 2007



1.4. Postopek za vzorčenje tal na KPP v letu 2007

Za vzorčenje tal sta predvidena dva vzorčevalca (ki jih v nadaljevanju imenujemo A in B), tri vzorčevalna mesta (J, SV, SZ) in predlagan naslednji postopek:

1. Vzorčevalca najdeta središče stalne vzorčne KPP ploskve (oz. Koncentrične Permanentne Ploskve), praviloma označeno s kovinskim količkom.
2. Vzorčevalca poiščeta vzorčevalno mesto J tako, da od središča KPP ploskve z desetmetrsko vrvico ali metrom odmerita 10 m proti jugu (vzorčevalec A stoji nad središčem KPP, drži en konec merilnega traku ali vrvice in s kompasom usmerja vzorčevalca B, ki v tej smeri na koncu iztegnjene vrvice oz. na oddaljenosti 10 m položi lesen okvir na tla – upoštevaj naklon).
3. Na tem mestu vzorčevalec B izmeri debelino organskih horizontov ter z vbodom ošiljene kovinske palice z ročajem v tla še globino mineralnega dela tal in oceni skeletnost tega dela tal. Nato tako sondiranje tal ponovi še na štirih vbodnih mestih, od prvega oddaljenih okoli 1 meter in v smereh sever, vzhod, jug, zahod.
4. Medtem vzorčevalec A vpiše v obrazec podatke o KPP, o vzorčevalnem mestu J in o talnih sondažah in, če je potrebno, pomaga vzorčevalcu B, npr.: z batom zabijati palico z ročajem v tla, meriti debelino organskih horizontov ipd.
5. Na osnovi sondažnih vbodov vzorčevalec B določi vzorčevalno mesto J na najbolj reprezentativnem od petih vbodnih mest. Na tem mestu naj bi imela tla tako globino, debelino organskega horizonta, skeletnost in kamnitost/skalnatost, kakršna prevladuje na petih vbodnih mestih in naj bi bila ohranjena (izogibamo se vlakam, izvalom in podobnim motnjam tal). Vzorčevalno mesto naj bi bilo od dreves in štorov oddaljeno vsaj pol metra, da vzorčena tla ne bi bila preveč prekoreninjena.
6. Na izbranem vzorčevalnem mestu vzorčevalca s 4 aluminijastimi klini pritrdita lesen okvir (z notranjo velikostjo 25 cm × 25 cm) v tla.
7. Nato iz njegove notranjosti odvzameta plast opada tako, da ga ročno nabereta v plastičen pladenj in ga nato streseta v plastično vrečko z etiketo, na kateri so vpisani podatki o KPP, vzorčevalnem mestu J in vzorcu opada O_l. (Če gre hitreje, ga lahko nabereta tudi neposredno v vrečko), ki jo nato zavežeta.

Organski horizont je lahko sestavljen iz enega, dveh ali treh podhorizontov.

O_l (*litter* = opad): za ta organski podhorizont je značilno, da ga sestavlja nakopičena organska snov, po poreklu večinoma iz listov, iglic, vejic in lesnih ostankov. Izvirna struktura te biomase se večinoma še dobro razloči. Listje in/ali iglice je/so že lahko razbarvano in neznatno fragmentirano. Drobna organska substanca (v kateri se s prostim očesom ne razpozna izvirnega porekla) zavzema manj kot 10 % prostornine plasti. Ostankov, debelejših od **2 cm**, in **živih organizmov** (rastlin, živali, gob) ne nabiramo, ampak jih odstranimo iz vzorca!

8. Sledi odvzem ostalega dela organskega horizonta (če je prisoten). Tudi tega s pomočjo ročnega orodja najprej nabereta iz notranjosti okvirja v plastičen pladenj in ga nato streseta v plastično vrečko z etiketo, na kateri so vpisani podatki o KPP, vzorčevalnem mestu J in vzorcu preostalega dela organskega horizonta (O_f + O_h). Vzorec mora

vsebovati ves material te plasti, tudi žive korenine (ki jih porežeta z vrtnimi škarjami) in morebitni skelet (npr. drobir, posamezno kamenje idr.). Ko je ves material plasti v vrečki, jo zavežeta. V primerih, ko je debelina preostalega dela organskega horizonta (O_f + O_h) večja od **10 cm**, se njegov vzorec lahko vzame s cevasto sondo na treh mestih, kar se obvezno označi na etiketi in v obrazcu (napišemo: 3 × Φ 7 cm). Tako se dobi dovolj vzorca v krajšem času.

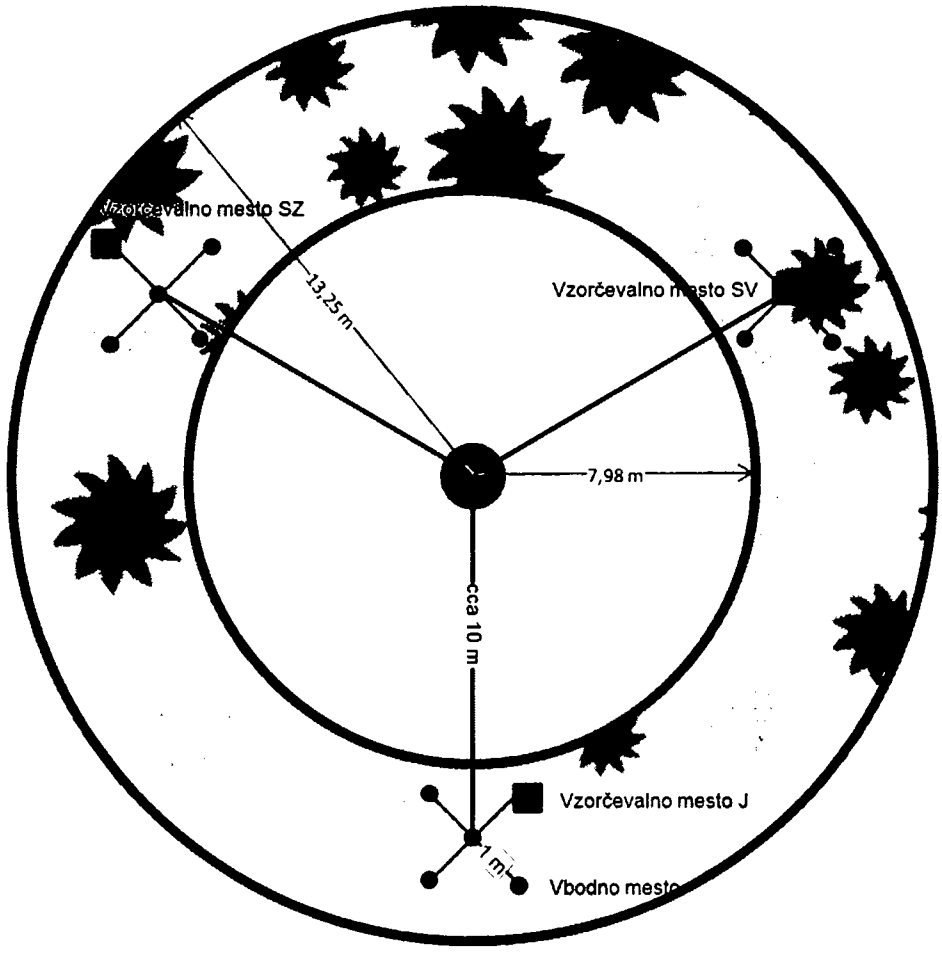
O_f (*fermentation* = fermentacija): za ta organski podhorizont je značilno, da vsebuje nakopičeno delno razkrojeno (t.j. razločno razdrobljeno, pobledelo, pegasto do lisasto) organsko snov, po poreklu večinoma iz listov, iglic, vejic in lesnih ostankov. Drobna organska substanca zavzema od 10 % do 70 % prostornine.

O_h (*humification* = humifikacija): v tem organskem podhorizontu je nakopičena že razkrojena organska snov, pri kateri izvirna zgradba in poreklo ni več razvidno. Drobna organska substanca zavzema več kot 70 % prostornine. Od **O_f** horizonta se razlikuje po tem, da je zaradi delovanja talnih organizmov bolj humificiran. Praviloma je močno prekoreninjen. Če je suh, je večinoma sipke konsistence in prašnate oz. drobnomrvičaste strukture.

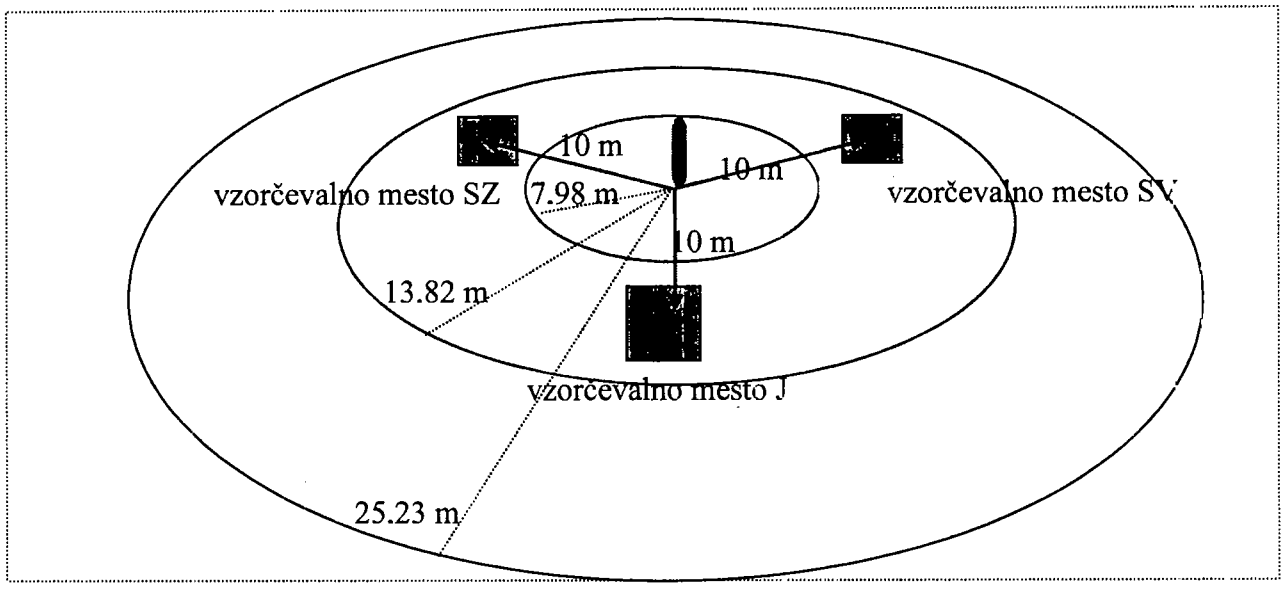
Često je težko najti mejo med **O_h** podhorizontom in pod njim ležečim **A** horizontom, pri katerem pa je humificirana organska snov večinoma že močno premešana z mineralno sestavino, zato je praviloma manj temnorjave barve in ima že zrnčasto do grudičasto strukturo ter večjo skeletnost.

9. Sledi odvzem kvantitativnih vzorcev mineralnega dela tal iz globine od 0 do 10 cm (ta vzorec označujemo z M10) in od 10 do 40 cm (ta vzorec označujemo z M40) – če so tla dovolj globoka. Ta dva vzorca se odvzame s cevasto sondo. Zato na spodnjem delu sonde vzorčevalca z metrom izmerita in s flomastrom označita dolžini 10 in 40 cm.
10. Vzorčevalec A vloži glavo v vrh cevaste sonde, postavi sondo navpično na površino tal v lesenem kvadratu, iz katere je že odstranjen organski horizont in drži sondo v tem položaju, medtem ko vzorčevalec B s tolčenjem z batom po glavi sonde zabije sondo 10 cm globoko v tla (do barvne oznake). Vzorčevalec A kontrolira globino zabijanja in pravočasno opozori vzorčevalca B, kdaj je treba nehati z zabijanjem. Pri strmem terenu je potrebno upoštevati, da se doseže povprečna globina 10 cm takrat, ko je pol oznake še vidne, pol pa že v tleh.
11. Vzorčevalca izvlečeta sondo, iz nje streseta ali s pomočjo noža odstranita vzorec v pladenj ali v vedro in ga nato pretreseta v plastično vrečko z etiketo, na kateri so vpisani podatki o KPP, vzorčevalnem mestu J in vzorcu M10. Preverita, če je vrtina ustrezno globoka in če je v njej še ostal material, ki pripada vzorcu (npr. korenine). Tudi ta material odvzameta in vneseta v vrečko, ki jo nato zavežeta.
12. Nato v že 10 cm globoko vrtino vložita sondo, jo zabijeta do globine 40 cm, izvlečeta, streseta vzorec v pladenj ali v vedro. Preverita, če je vrtina ustrezno globoka in če je v njej še ostal material, ki pripada vzorcu M 40. Če je, ga poskusita odvzeti. Če je vzorčenje neuspešno, ga ponovita v notranjosti lesenega kvadrata na drugem mestu. Če so tla plitvejša od 40 cm, zabijeta sondo, do kamor se da, **obvezno** zabeležita doseženo globino v obrazec ploskve in na etiketo vrečke ter dobljeni vzorec streseta v vrečko ter jo zavežeta.

13. Do konca izpolnita obrazec ploskve s podatki o vzorcih vzorčevalnega mesta J.
14. Vse talne vzorce vzorčevalnega mesta J položita v mrežasto vrečo za prenos vrečk, ki jo odneseta do sredine KPP.
15. Vzorčevalca poiščeta vzorčevalno mesto SV tako, da od središča KPP ploskve z desetmetrsko vrvico ali metrom odmerita 10 m proti severovzhodu (upoštevaj naklon).
16. Po enakem postopku, kot je opisan za vzorčevalno mesto J, izvedeta vzorčenje tal na vzorčevalnem mestu SV.
17. Po enakem postopku, kot je opisan za vzorčevalno mesto J, izvedeta vzorčenje tal tudi na vzorčevalnem mestu SZ.
18. Na koncu preverita, če je obrazec za vpis podatkov o KPP, vzorčevalnih mestih in talnih vzorcih pravilno izpolnjen in s tem zaključita vzorčenje na tej KPP.
19. Vrečke z nabranimi talnimi vzorci se čimprej oddajo v laboratorij gozdarskega inštituta.

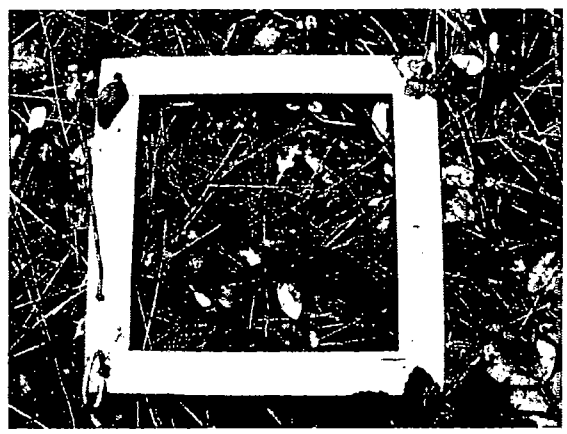


Izbira vzorčevalnega mesta na reprezentativnem vbodnem mestu.



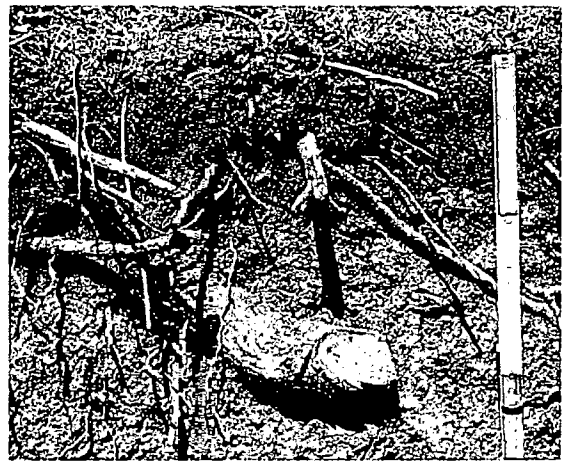
Lega vzorčevalnih mest J, SV in SZ na KPP ploskvi

Vzorčevalec izmeri debelino organskih horizontov ter z vbodom ošiljene kovinske palice z ročajem v tla še globino mineralnega dela tal in oceni skeletnost tega dela tal.



O_l (*litter* = opad): za ta organski podhorizont je značilno, da ga sestavlja nakopičena organska snov, po poreklu večinoma iz listov, iglic, vejic in lesnih ostankov. Izvirna struktura te biomase se večinoma še dobro razloči. Listje in/ali iglice je/so že lahko razbarvano in neznatno fragmentirano. Drobna organska substanca (v kateri se s prostim očesom ne razpozna izvirnega porekla) zavzema manj kot 10 % prostornine plasti. Ostankov, debelejših od **2cm**, in živih organizmov (rastlin, živali, gob) ne nabiramo,ampak odstranimo iz vzorca!

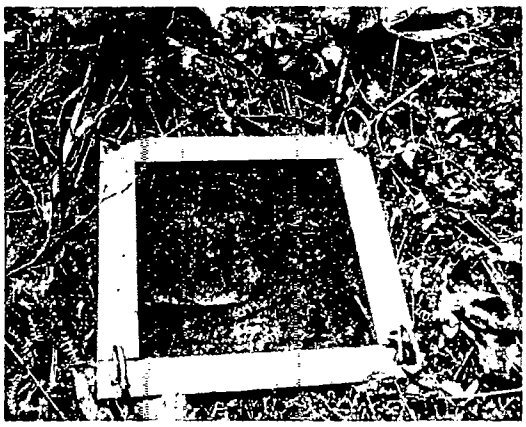
Sprsteninasta humusna oblika, sestavljena iz opada O_l in fermentacijskega organskega podhorizonta O_f.



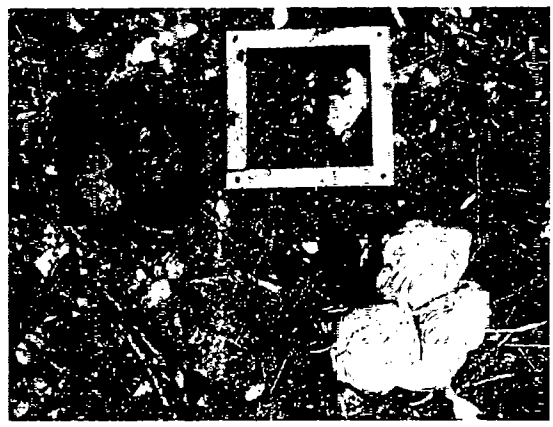
Prhninasta humusna oblika, sestavljena iz opada O_l, fermentacijskega organskega podhorizonta O_f in humusnega organskega podhorizonta O_h

Na reprezentativnem vbodnem mestu pritrdimo leseni okvir s klini v tla.

Iz notranjosti okvirja najprej odvzamemo opad Ol in ga vnesemo v plastično vrečko, označeno z etiketo.

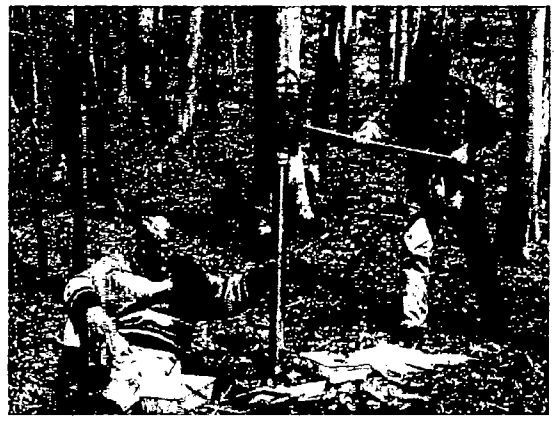


Sledi odvzem ostalega dela organskega horizonta ($O_f + O_h$), če je prisoten.



Predvsem v gorskem svetu se pojavljajo avtomorfna organska tla, ki imajo (tako kot hidromorfna šotna tla) samo organski horizont.

Sledi odvzem kvantitativnih vzorcev mineralnega dela tal iz globine od 0 do 10 cm (ta vzorec označujemo z M10) in od 10 do 40 cm (ta vzorec označujemo z M40). Ta dva vzorca se odvzame s cevasto sondo.



Vzorčevalec A vloži glavo v vrh cevaste sonde, postavi sondo navpično na površino tal v lesenem kvadratu, iz katere je že odstranjen organski horizont in drži sondo v tem položaju, medtem ko vzorčevalec B s tolčenjem z batom po glavi sonde zabije sondo 10 cm globoko v tla.

Vse talne vzorce vzorčevalnih mest položita v mrežasto vrečo za prenos vrečk.

Laboratorijske analize tal za mrežo 8x8

Priprava vzorca

Vzorci so bili prinešeni s terena v plastičnih vrečkah. V laboratoriju smo jih stehtali na gram natančno, odprli in v tehtič vzeli del vzorca za določitev trenutne vlažnosti tal. Vlažnost tal smo določili z analizatorjem vlage Sartorius MA45 z infrardečim gretjem (105 °C) vzorca do konstantne mase po gravimetrični metodi (ISO 11465). Vlažnost tal je izražena v utežnih odstotkih na maso posušenega vzorca.
Vzorce smo pretresli na pladnje in jih sušili na zraku.
Ko so bili vzorci dovolj suhi, smo jih presejali skozi nekovinsko 2 mm sito. Pri tem smo ločili skelet in korenine od ostalih tal. Vsako frakcijo posebej smo stehtali. Skeletu smo določili tudi volumen s potopno tehniko.

Presejani frakciji tal smo ponovno določili vsebnost vlage, saj so bili vsi analitski rezultati, ki so odvisni od tega parametra, korigirani na maso vzorcev pri 105°C.

Del presejanih tal smo še dodatno zmleli v planetarnem krogličnem nekovinskem mlinu Fritsch Pulverisette 5 s kroglicami iz cirkonijevega oksida za potrebe CNS analize.

Reakcija tal (pH tal)

Vrednost pH tal smo določili elektrometrično v suspenziji mešanice vzorca tal in 0,01 M kalcijevega klorida ($CaCl_2$) v volumskem razmerju 1:5 (ISO 10390). Pred meritvijo smo suspenzijo mešali z magnetnim mešalom 5 min, meritev pa smo izvedli po dveh urah. Neposredno pred merjenjem s pH metrom smo suspenzijo ponovno premešali, še pred tem pa pH meter umerili s pufrskima raztopinama vrednosti 4 in 7.

Določevanje porazdelitve velikosti delcev v mineralnem delu tal - Metoda s sejanjem in usedanjem

Porazdelitev velikosti delcev smo analizirali s sejanjem in sedimentacijo (ISO 11277). Presejane vzorce tal smo prelili z raztopino natrijevega pirofosfata, stresali v ultrazvočni kopeli. Za prvo frakcijo (pesek) smo suspenzijo presejali skozi 63 mikronsko sito in ostanek s sita kvantitativno prenesli v izparilnico ter posušili do suhega. Presejano suspenzijo vzorca smo kvantitativno prenesli v cilinder prostornine 1 litra in dopolnili z ultra čisto vodo do oznake. Preostale tri frakcije smo določili s pipetno metodo. Po ročnem dvominutnem stresanju vzorca smo po točno določenem času odpipetirali iz v naprej predpisane globine 10 mL vzorca, ga kvantitativno prenesli v izparilnico in ga posušili do suhega. To smo naredili trikrat po različnem času. Iz preostankov smo izračunali delež grobega in finega melja ter gline v vzorcu: 2 – 0,063 mm (pesek), 0,063 – 0.020 mm (grobi melj), 0,020 – 0,002 (fini melj) in < 0,002 mm (glina).

Skupni ogljik, dušik in žveplo

V talnih vzorcih smo skupni ogljik (C), dušik (N) in žveplo (S) določili s suhim sežigom (ISO 10694, ISO 13878, ISO 15178). S sežigom pri visoki temperaturi 1350 °C v čistem kisiku dosežemo, da mineralne in organske snovi popolnoma oksidirajo. Z analizatorjem Leco CNS-2000 smo na osnovi IR spektroskopije in toplotne prevodnosti določili CO_2 in SO_2 oz. N_2. Glede na količino teh plinov so bile v vzorcu vsebovane ustrezne količine ogljika, dušika in žvepla.

Karbonati

Vsebnost karbonatov v talnih vzorcih smo določili po Scheiblerju (ISO 10693). Posušen, presejan in homogeniziran talni vzorec (2 mm, zračno suh) znane mase smo zatehtali v erlenmajerico, nepredušno zaprli in prelili s presežkom 4 M klorovodikove kisline (HCl), pri čemer se je razgradil karbonat v vzorcu. V reakciji je nastal ogljikov dioksid (CO_2), volumen katerega smo izmerili s Scheiblerjevim kalcimetrom (Eijkelkamp). Pri meritvah smo pazili, da so bili trenutni pogoji (temperatura, zračni tlak) čim bolj konstantni (termostatirana soba), kvantifikacijo rezultatov pa nam je omogočila kalibracija s čistim kalcijevim karbonatom.

Organski ogljik

Zaradi pretežno karbonatne matične podlage smo skupni organski ogljik v tleh (TOC) izračunali po posredni metodi (ISO 10694). Po tej metodi od skupnega ogljika odštejemo mineralni (anorganski) ogljik, ki se v tleh največkrat pojavlja v obliki karbonatov. Z znanim skupnim ogljikom (TC) in anorganskim ogljikom (IC), t.j. karbonatov, ki smo jih določili po Scheiblerju, delež skupnega organskega ogljika izračunamo kot razliko obeh oblik ogljika Organsko snov v tleh (SOM) izračunamo s konvencionalnim faktorjem 1.724 (Birkeland, 1999), ki ga pomnožimo s skupnim organskim ogljikom.

Vir: ICP tla

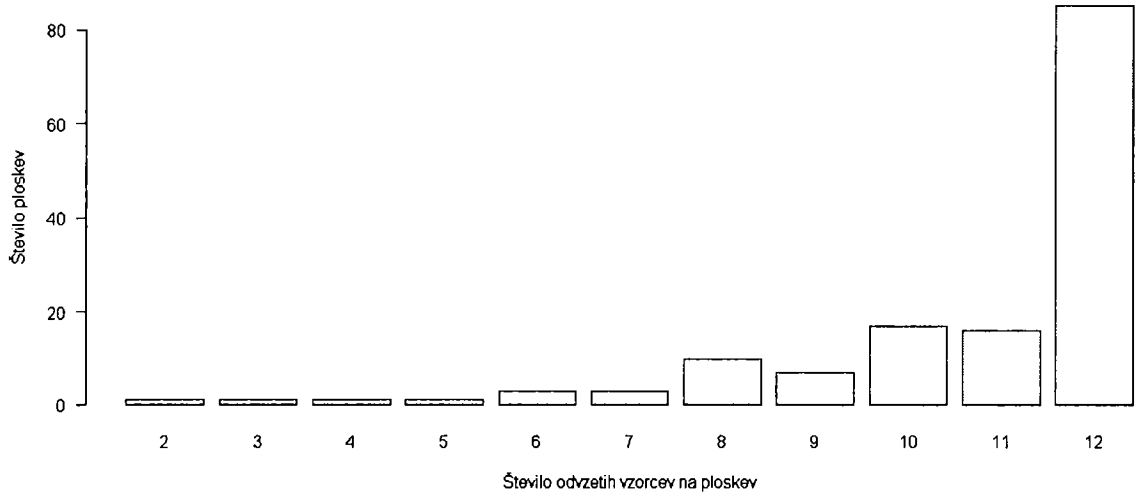
1 SPLOŠNA ANALIZA PODATKOV

Točk 16 × 16 km mreže je 45, točk 8 × 8 km mreže pa je v podatkovni bazi LGE GIS 147, za dve točki z oznako 3545 ter 7005 ni na voljo podatkov. V analizo je bilo zajetih 145 KPP ploskev (Slika 1).

Slika 1: Vzorčne mreže na ravni Slovenije.

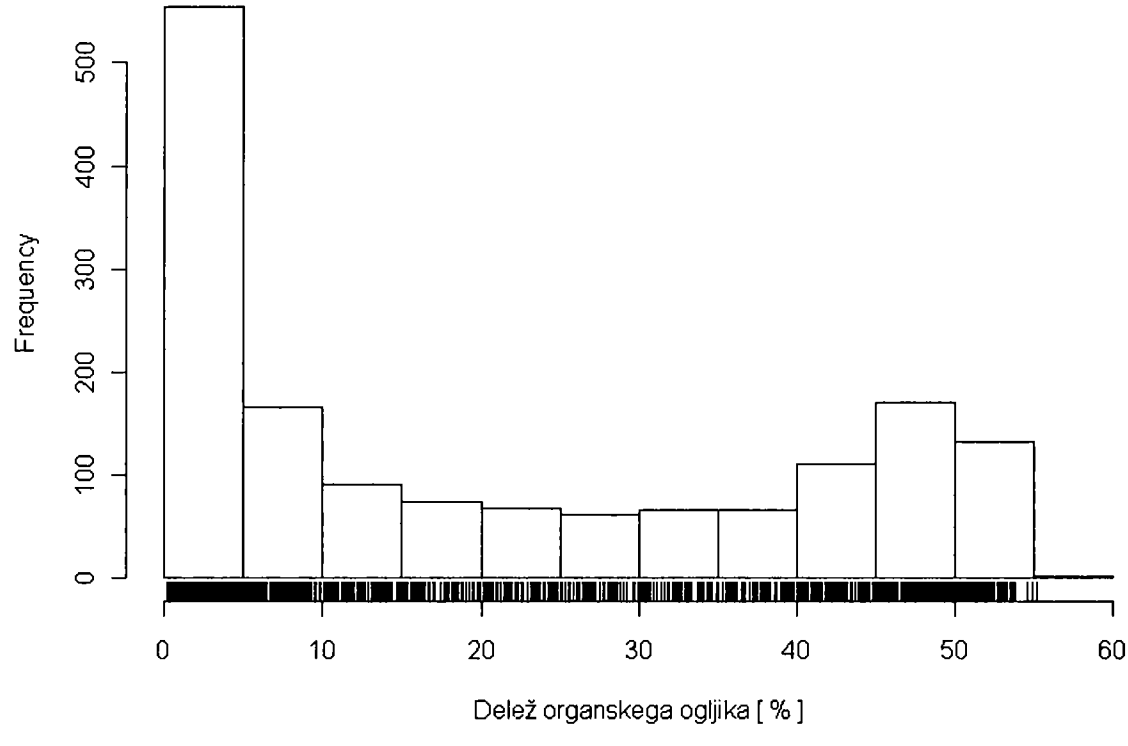
Na 85 ploskvah 8x8 km mreže je bilo odvzetih po 12 vzorcev tal (3 × O_l, O_{fh}, M_{10} ter M_{40}), na 16 ploskvah je bilo odvzetih 11 vzorcev, ter na 17 ploskvah 10 (Slika 2). Skupno je bilo odvzetih 1562 vzorcev gozdnih tal. Koncentracija organskega ogljika (*C_org*) se v analiziranih vzorcih giblje med 0.21 % ter 55.2 % (Slika 3), delež skeleta v vzorcih tal (*Skel_proc*) dosega vrednosti do 54,6 %, prav tako delež skeleta in korenina skupaj (*Proc*) dosega vrednost do 54,6 % (Slika 4).

C_org	Tla_105	Skel_proc	Proc
Min. : 0.2156	Min. :0.000887	Min. : 0.000	Min. : 0.000
1st Qu.: 3.1809	1st Qu.:0.041702	1st Qu.: 0.000	1st Qu.: 0.000
Median :13.2080	Median :0.206251	Median : 0.000	Median : 0.000
Mean :20.8350	Mean :0.345441	Mean : 3.038	Mean : 3.104
3rd Qu.:41.2491	3rd Qu.:0.459298	3rd Qu.: 2.598	3rd Qu.: 2.727
Max. :55.2143	Max. :3.679471	Max. :54.567	Max. :54.567



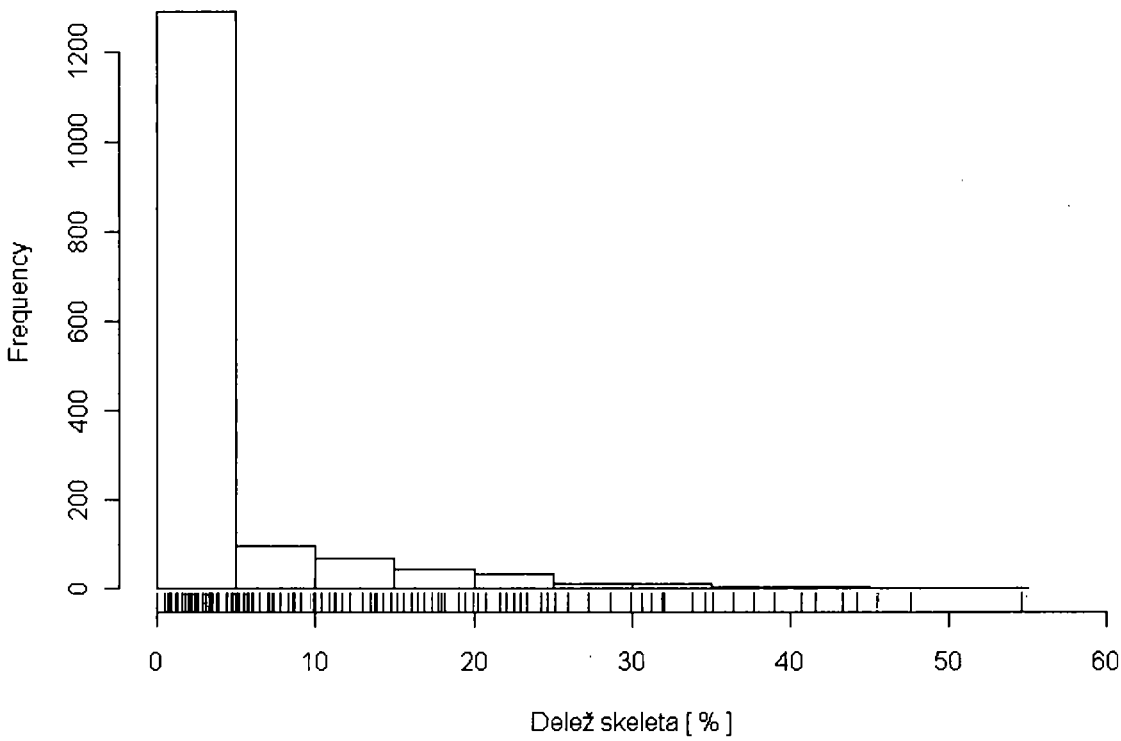
Slika 2: Število odvzetih vzorcev tal na ploskev.

Frekvenčna porazdelitev vrednosti koncentracije organskega ogljika v vzorcih tal ima značilno J obliko z nekoliko večjim številom vzorcev v območju med 45 in 50 % (Slika 3).



Slika 3: Porazdelitev vrednosti spremenljivke C_org v nabranih vzorcih.

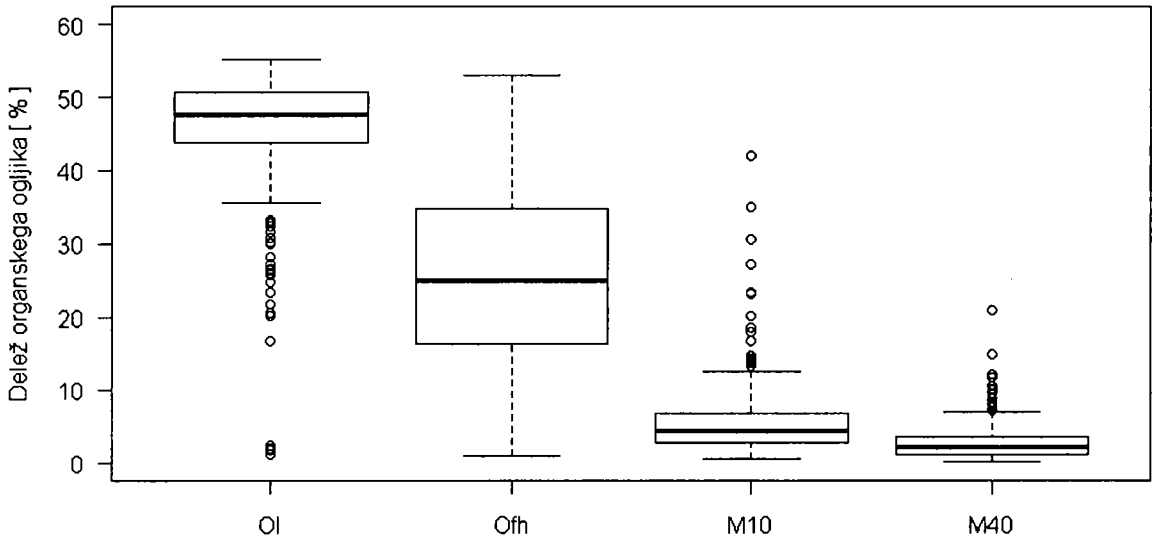
Skelet v tleh smo izračunali le za mineralni del tal in sicer kot razliko med teoretičnim volumnom vzorca (t.j. volumen valja dolžine 10 (za vzorce M_{10}) oz. 30 cm (za vzorce M_{40})) ter volumnom skeleta, ki je bil izmerjen v LGE (vir: Podatkovna baza za tla LGE/GIS). Iz frekvenčne porazdelitve vrednosti skeleta (Slika 4) je razvidno, da v večini vzorcev ni bilo skeleta, v povprečju pa je bilo v vzorčenih tleh 3 % skeleta.



Slika 4: Porazdelitev vrednosti skeleta v mineralnem delu tal v nabranih vzorcih.

2 ANALIZA KONCENTRACIJE OGLJIKA PO HORIZONTIH OZ. PLASTEH

Pričakovano imajo vzorci horizonta O_l najvišjo koncentracijo organskega ogljika (povprečje 45,8 %), vzorci v globini tal med 10 in 40 cm (M_{40}) pa najnižjo (povprečje 2.8 %).

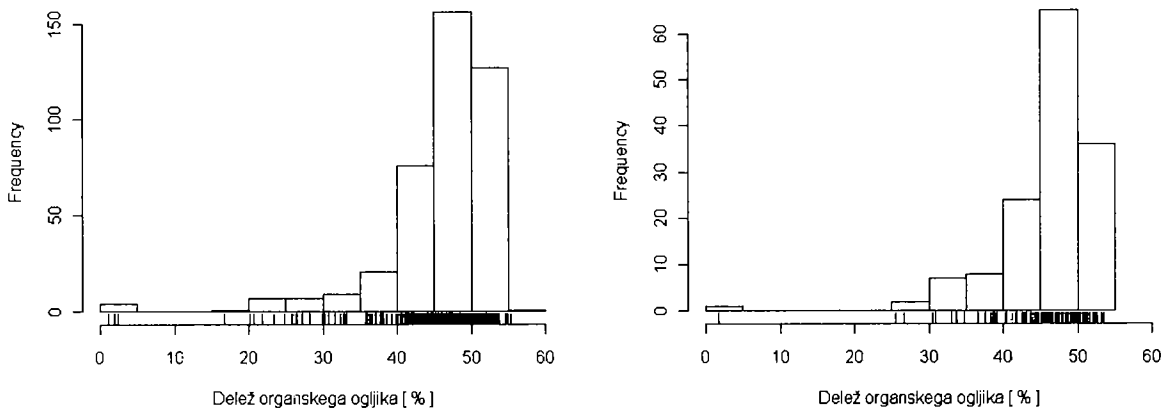


Slika 5: Okvirji z ročaji za vrednost organskega ogljika po posameznih horizontih oz. plasteh.

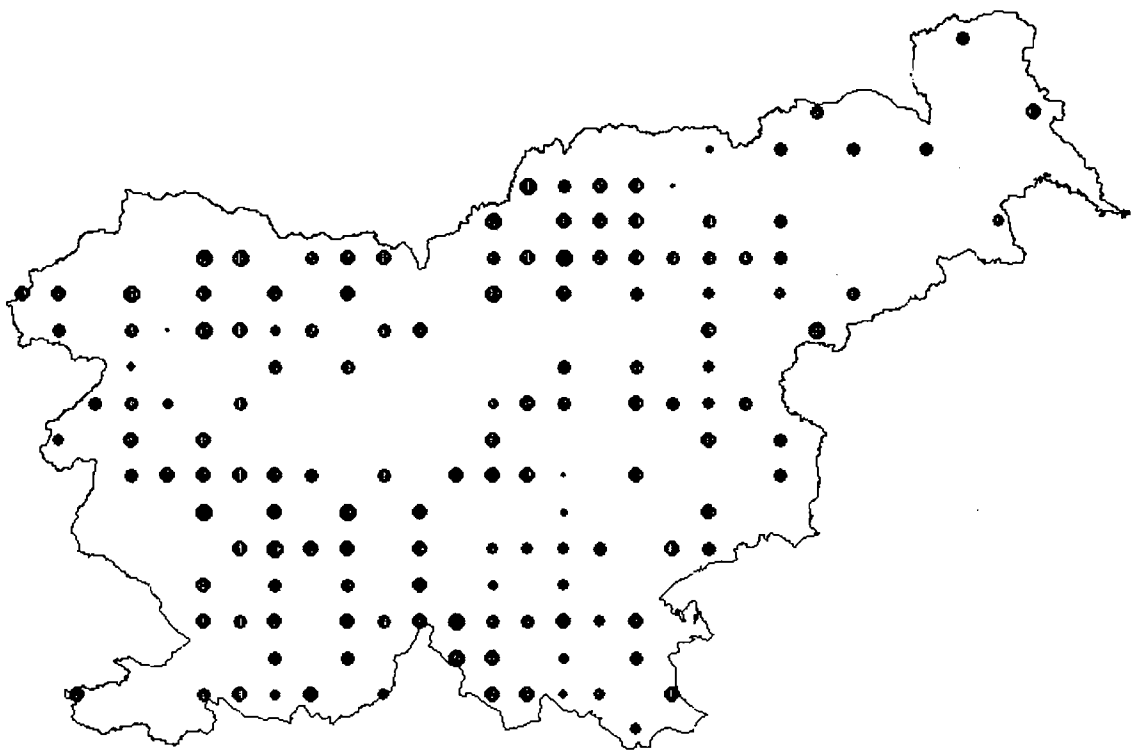
3 PROSTORSKA RAZPOREDITEV KONCENTRACIJE OGLJIKA

3.1 O_l

V podatkovni bazi LGE GIS je bilo 409 vzorcev O_l horizonta na 143 lokacijah. Od tega je bilo 5 vzorcev s koncentracijo organskega ogljika manjšo od 20 % . Nato smo izračunali povprečno vrednost koncentracije C_{org} na ploskvi in šele potem izločili lokacijo, kjer je bila koncentracija organskega ogljika manjšo od 20 %. Skupaj smo tako v analizo zajeli 142 lokacij.



Slika 6: Frekvenčna porazdelitev vrednosti C_{org} v vzorcih (desno) in povprečna vrednost na ploskvah (levo).

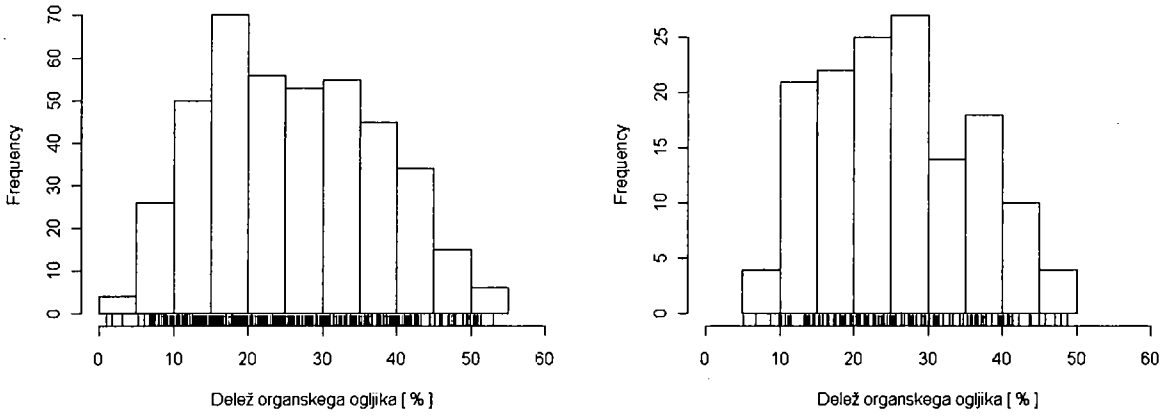


Slika 7: Razporeditev koncentracije organskega ogljika na ploskvah v O_l horizontu. Velikost simbola prikazuje vrednost koncentracij Corg. Z zeleno barvo so označene ploskve (3), za katere zaradi različnih vzrokov nismo upoštevali v nadaljlni analizi.

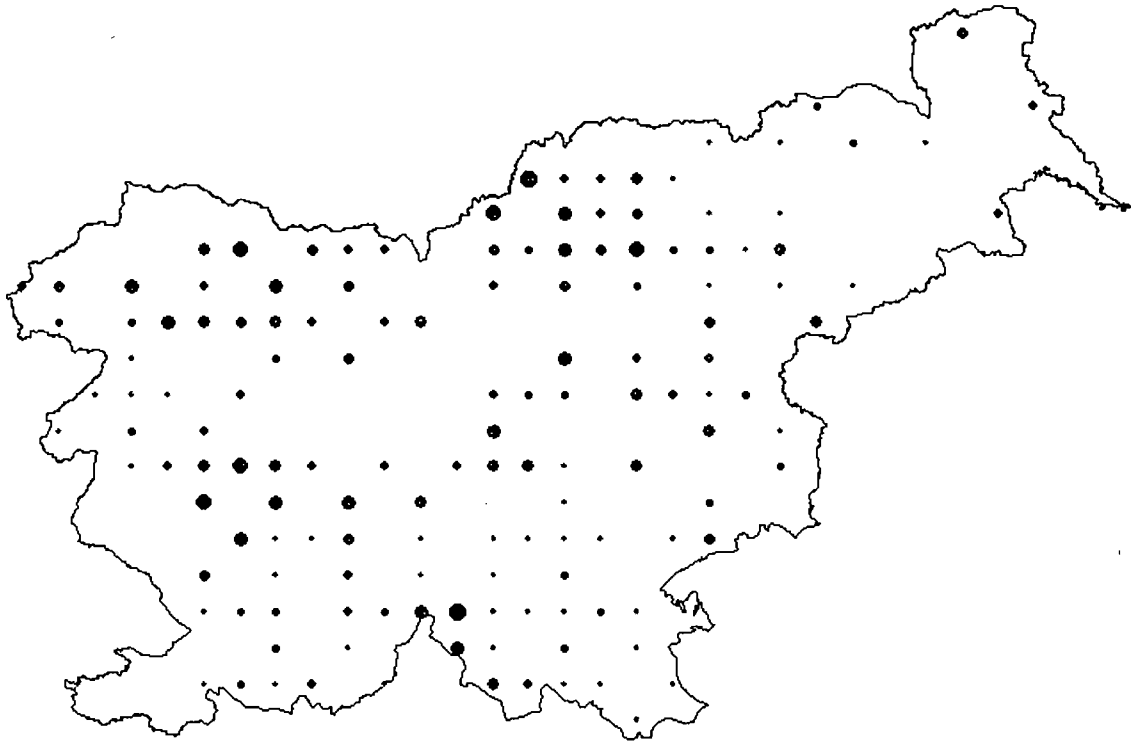
3.2 O_{fh}

V podatkovni bazi LGE GIS je bilo 414 vzorcev O_{fh} horizonta na 145 lokacijah. Od tega je bilo 150 vzorcev s koncentracijo organskega ogljika manjšo od 20 %. Nato smo izračunali povprečno vrednost koncentracije na ploskvi in šele potem izločili lokacije, kjer je bila

koncentracija C_{org} manjšo od 20 %. Teh lokacij je bilo 47. Skupaj smo tako v analizo zajeli 98 lokacij.



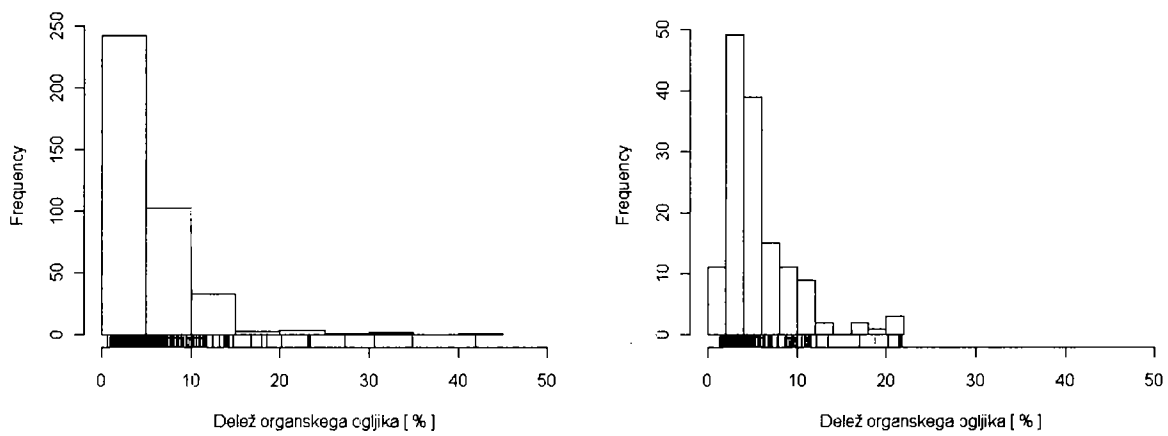
Slika 8: Frekvenčna porazdelitev vrednosti C_{org} v vzorcih (desno) in povprečna vrednost na ploskvah (levo).



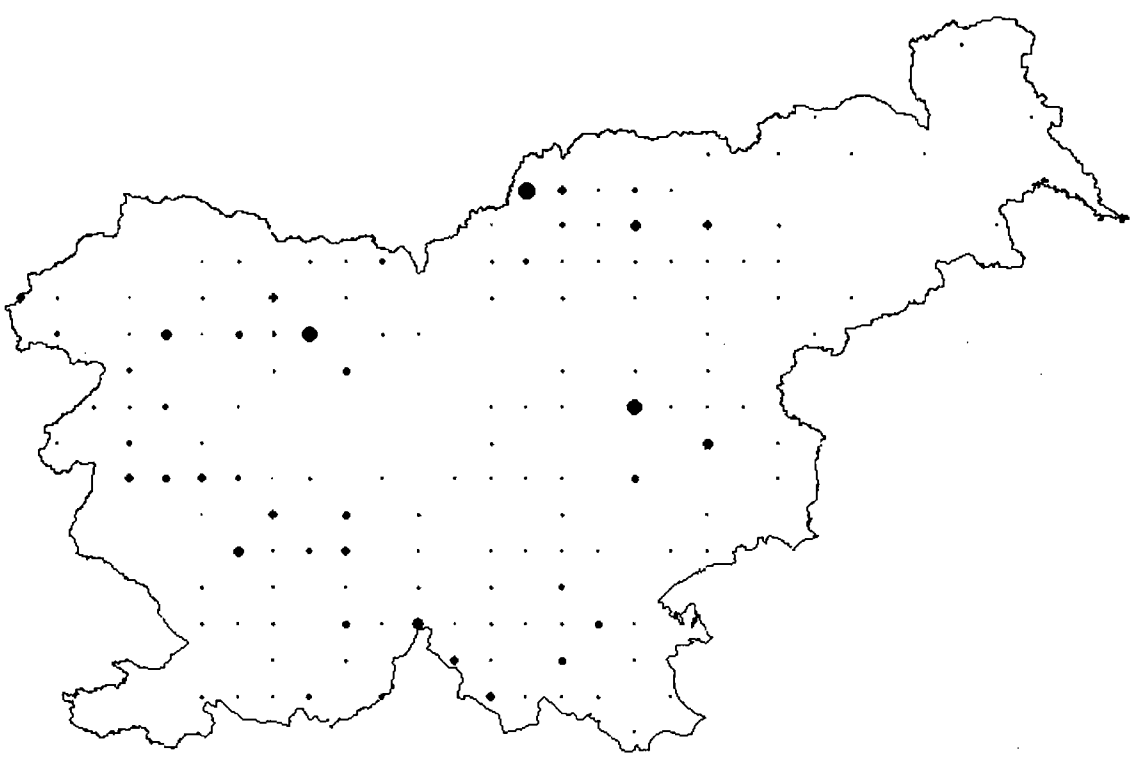
Slika 9: Razporeditev koncentracije organskega ogljika na ploskvah v O_{fh} horizontu. Velikost simbola prikazuje vrednost. Z zeleno barvo so označene ploskve, za katere zaradi različnih vzrokov nismo upoštevali v nadajljni analizi.

3.3 M_{10}

V podatkovni bazi LGE GIS je bilo 389 vzorcev M_{10} plasti na 142 lokacijah. Od tega je bilo 8 vzorcev s koncentracijo organskega ogljika večjo od 20 %. Nato smo izračunali povprečno vrednost koncentracije na ploskvi in šele potem izločili lokacije, kjer je bila koncentracija organskega ogljika večja od 20 %. Te lokacije so bile 3. Skupaj smo tako v analizo zajeli 139 lokacij.



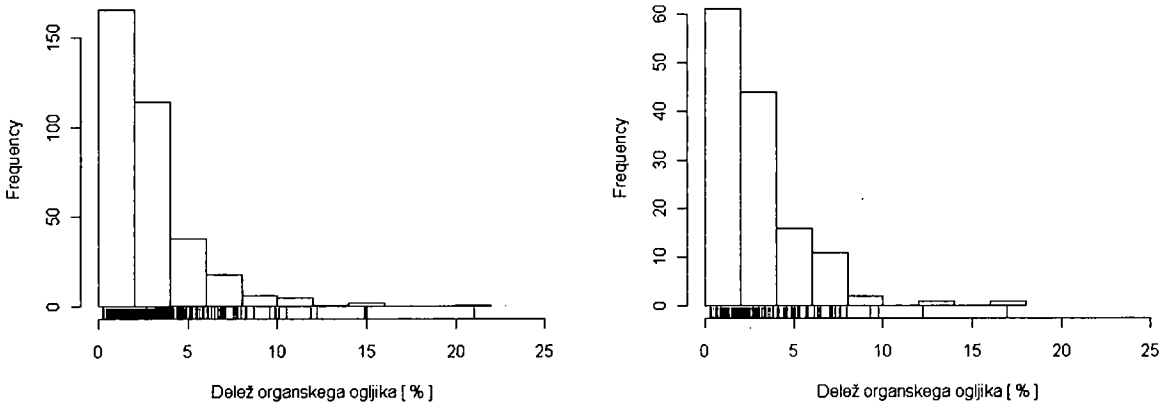
Slika 10: Frekvenčna porazdelitev vrednosti C_{org} v vzorcih (desno) in povprečna vrednost na ploskvah (levo).



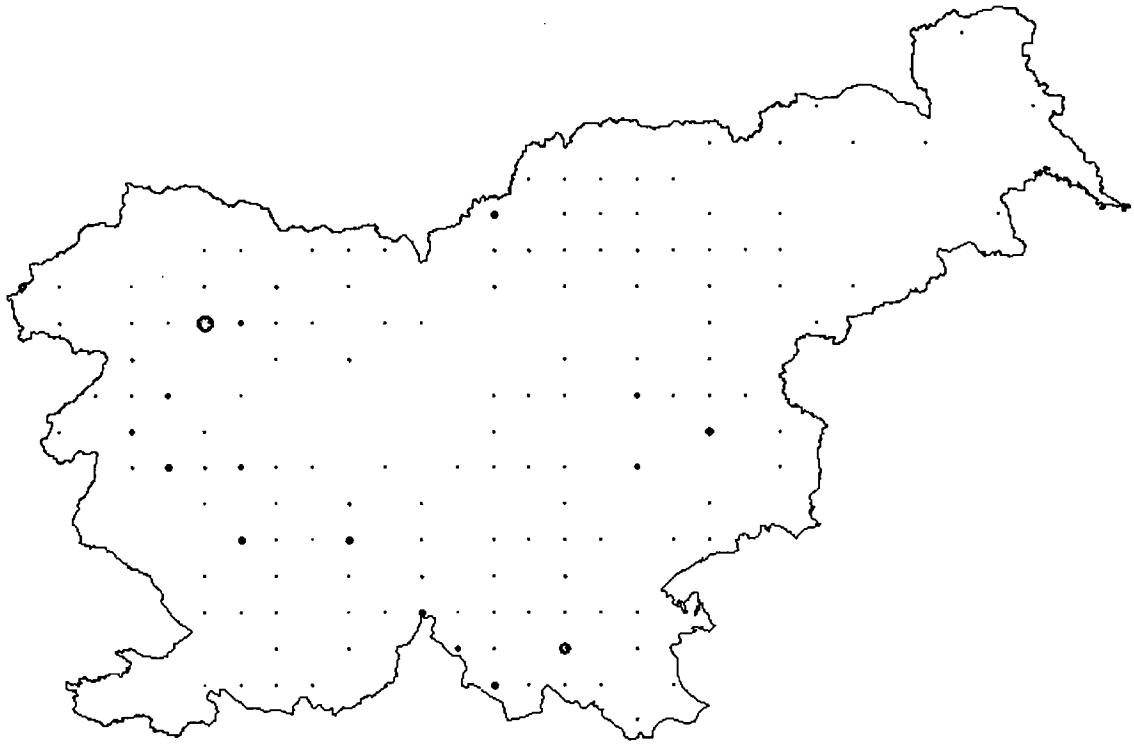
Slika 11: Razporeditev koncentracije organskega ogljika na ploskvah v plasti M_{10}. Velikost simbola prikazuje vrednost. Z zeleno barvo so označene ploskve, za katere zaradi različnih vzrokov nismo upoštevali v nadaljni analizi.

3.4 M_{40}

V podatkovni bazi LGE je bilo 350 vzorcev M_{40} plasti na 136 lokacijah. Od tega je bil 1 vzorec s koncentracijo organskega ogljika večjo od 20 %. Nato smo izračunali povprečno vrednost koncentracije na ploskvi in šele potem izločili lokacije, kjer je bila koncentracija organskega ogljika večja od 20 %. Takih lokacij ni bilo. Skupaj smo tako v analizo zajeli 136 lokacij.



Slika 12: Frekvenčna porazdelitev vrednosti C_{org} v vzorcih (desno) in povprečna vrednost na ploskvah (levo).



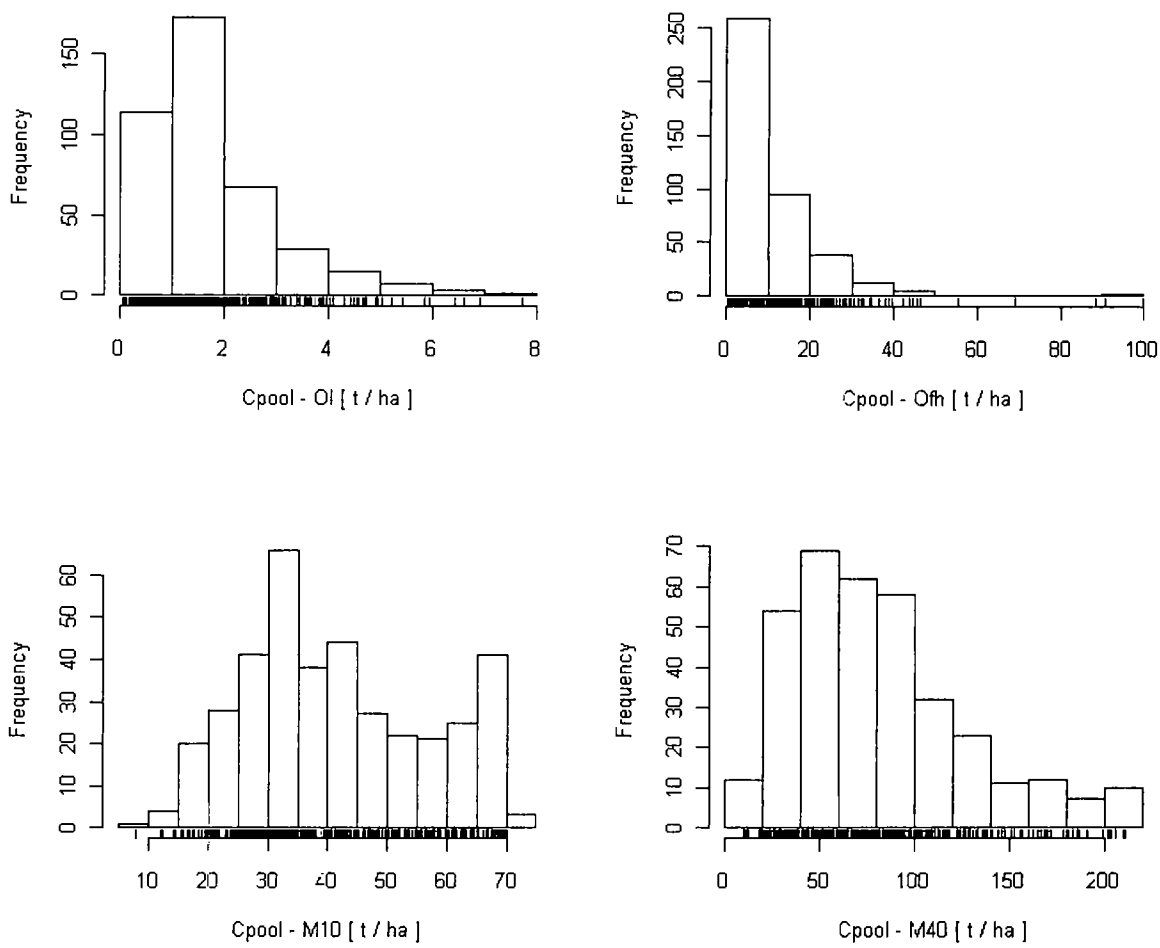
Slika 13: Razporeditev koncentracije organskega ogljika na ploskvah v plasti M_{40}. Velikost simbola prikazuje vrednost.

4 IZRAČUN ZALOGE ORGANSKEGA OGLJIKA

4.1 IZRAČUN ZALOGE ORGANSKEGA OGLJIKA V VVZORCIH

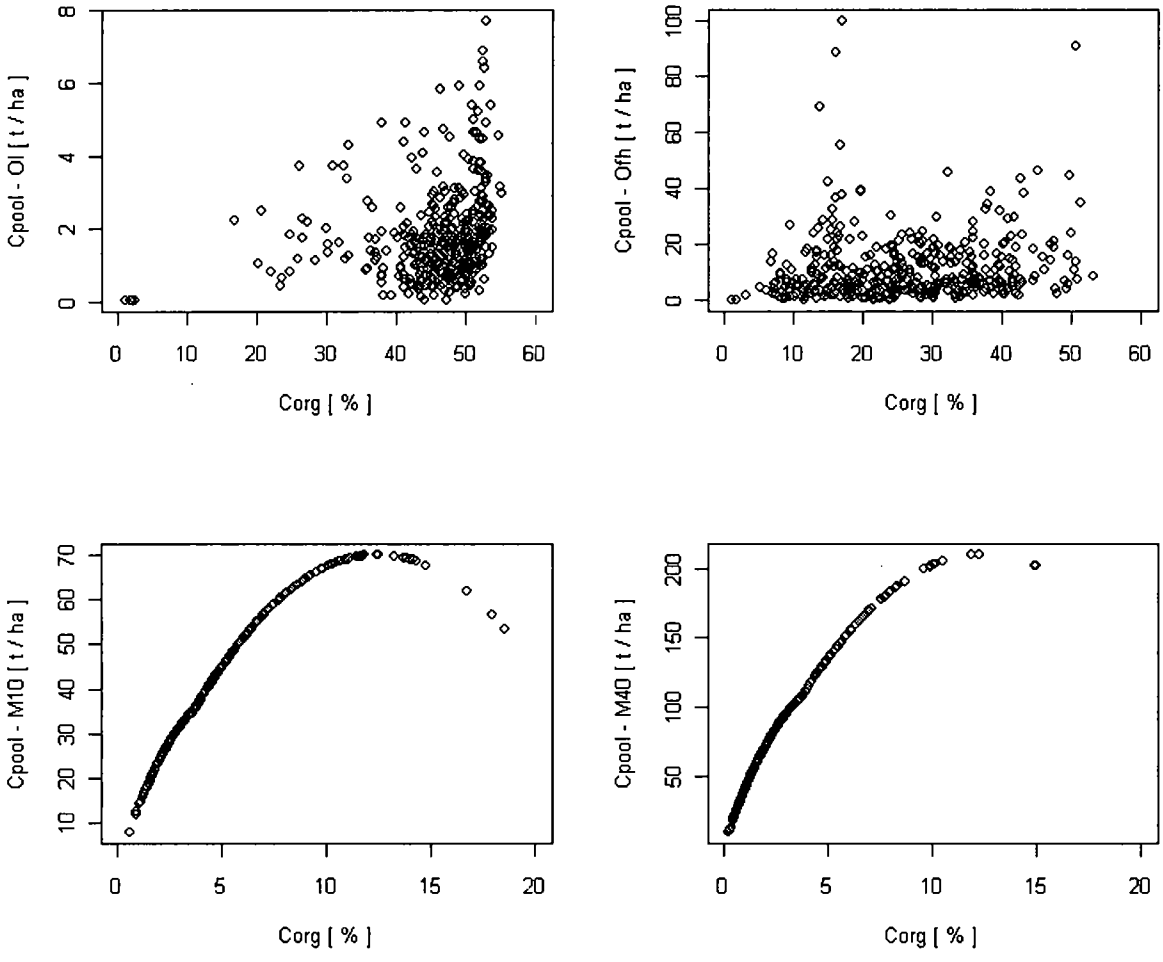
Zalogo organskega ogljika v vzorcih sem izračunal na sledeč način:

- za vzorce z oznako O_l ter O_{fh} sem predpostavil, da je bil vzorec nabrana na površini 625 cm^2, ne glede na vrednost C_{org}, ki je bila lahko tudi manjša od 20 %. Nato sem maso suhih tal pri 105°C (v kg / 625 cm^2) množil s koncentracijo organskega ogljika (%) in preračunal na površino (t / ha). Zaloge organskega ogljika (v t / ha) nisem zmanjšal niti za delež skeleta niti ne za delež korenin – ta dva podatka sta že bila odšteta od tal s tem, ko so bili vzorci tal presejani.
- za vzorce, ki so označeni kot M_{10} oz M_{40} sem najprej izračunal BD po formuli, razviti na podatkih 16 × 16 km mreže. Pri tem sem v izračunu upošteval le vzorce, ki so imeli koncentracijo organskega ogljika pod 20%. Nato sem za vsak vzorec zalogo ogljika izračunal kot: C_{pool} = f(C_{org}, BD, debelina) in preračunal na hektar (t / ha). Nato sem zalogo zmanjšal za delež skeleta ter delež korenin v vzorcu.



Slika 14: Frekvenčne porazdelitve zaloge organskega ogljika C_{pool} v posameznih vzorcih tal brez upoštevanja skeleta in korenin za vzorce M10 in M40.

Na naslednjih grafikonih so prikazane odvisnosti zaloge organskega ogljika v vzorcih glede na koncentracijo ogljika po posameznih horizontih oz. plasteh.

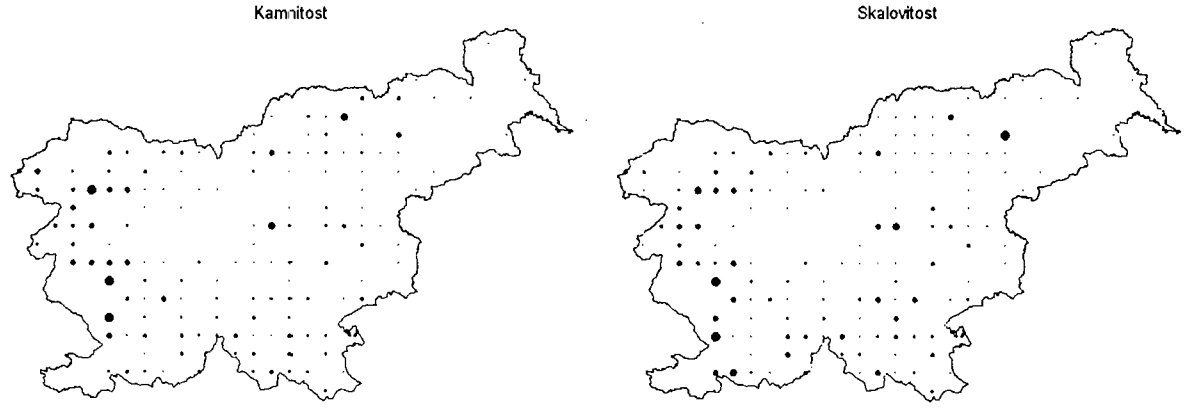


Slika 15: Odvisnosti zaloge organskega ogljika v vzorcih glede na koncentracijo ogljika po posameznih horizontih oz. plasteh.

4.2 IZRAČUN ZALOGE ORGANSKEGA OGLJIKA PO POSAMEZNIH HORIZONTIH OZ. PLASTEH NA PLOSKEV

Zalogo ogljika na ploskev smo izračunali ločeno po horizontih oz. plasteh in sicer kot povprečje dveh oz. treh meritev. Če je bila na ploskvi opravljena samo ena meritev (odvzet samo en vzorec tal) sem kot povprečno vrednost obravnaval to meritev. V primeru organskega dela tal, sem povprečno vrednost na ploskev zmanjšal za delež kamnitosti ter skalovitosti skupaj, za mineralni del tal pa sem povprečno zalogo organskega ogljika zmanjšal le za delež skalovitosti. Podatek o kamnitosti in skalovitosti na ploskev, sem privzel iz

podatkov inventure gozdov (Slika 16; VIR: podatkovna baza NMKG/GIS). *Cpool_1* je zaloga ogljika brez zmanjšanja zaradi deleža skeleta, brez zmanjšanja zaradi deleža korenin ter brez korekcije zaradi skalovitosti oz. kamnitosti; *Cpool_2* je zaloga ogljika s korekcijo zaradi deleža skeleta, ter brez upoštevanja deleža korenin ter brez korekcije zaradi skalovitosti oz. kamnitosti; Cpool_3 je zaloga ogljika s korekcijo zaradi deleža skeleta ter korekcijo zaradi deleža korenin in brez zmanjšanja zaradi skalovitosti oz. kamnitosti; *Cpool_4* je zaloga ogljika zmanjšanja zaradi deleža skeleta, zmanjšanja zaradi deleža korenin ter z upoštevno korekcijo zaradi skalovitosti oz. kamnitosti

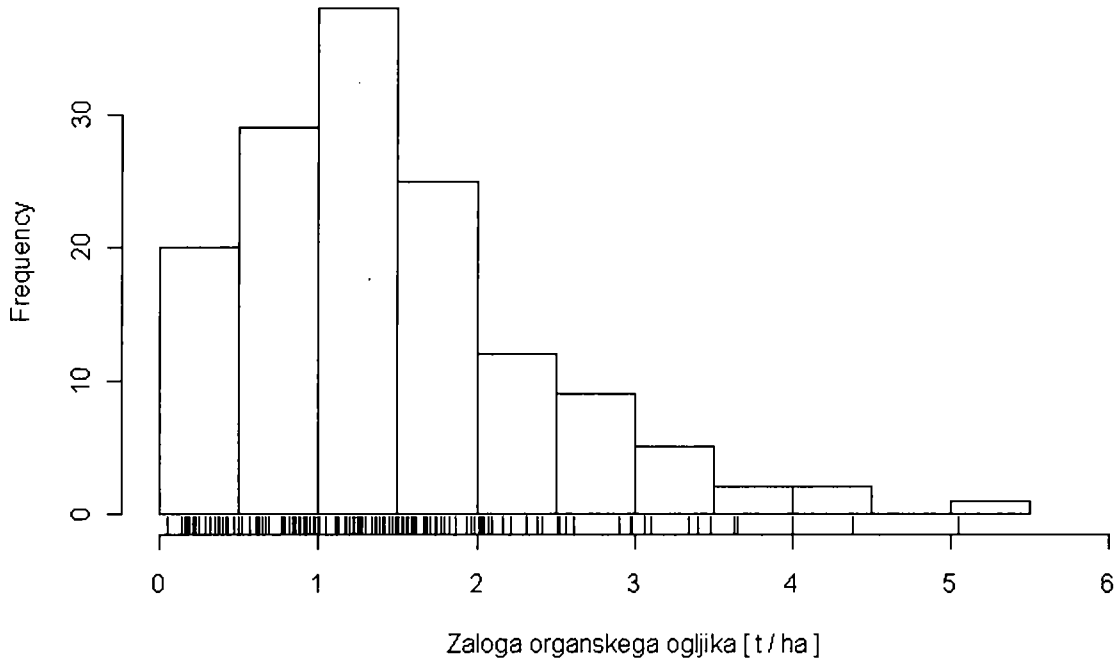


Slika 16: Kamnitost in skalovitost na ploskvah.

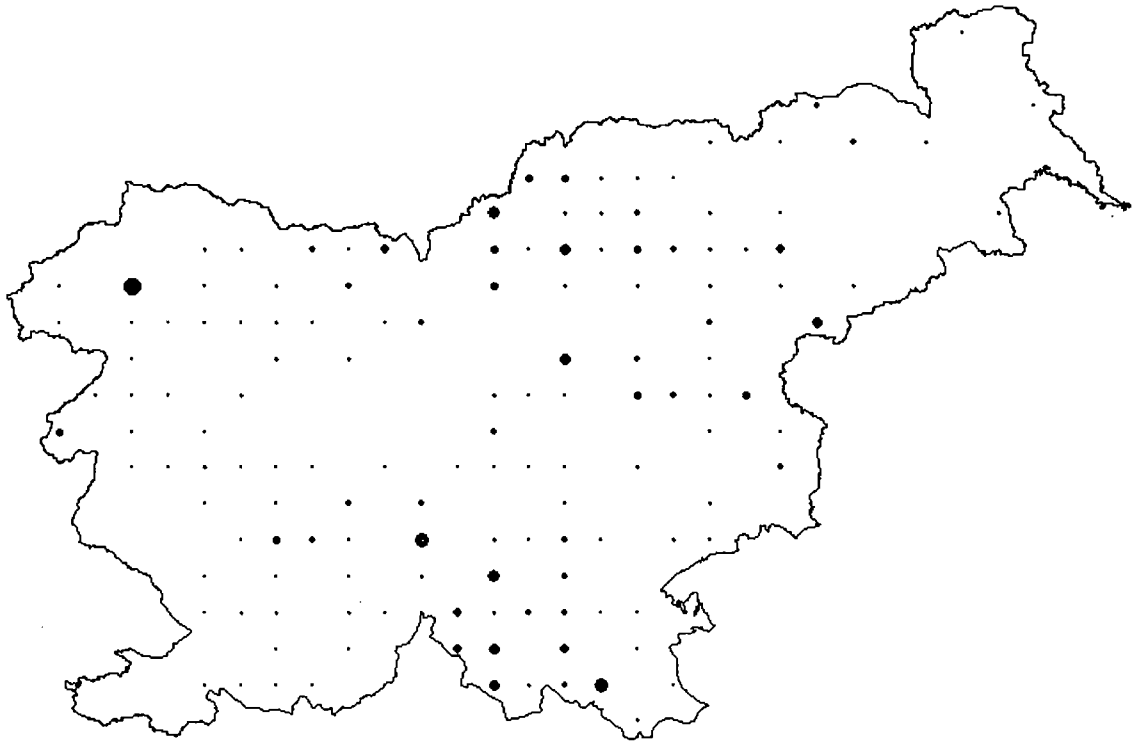
4.2.1 O_l horizont

Povprečna zaloga organskega ogljika v O_l horizontu (n = 143) je 1.44 ± 0.15 t/ha.

Cpool_1		Cpool_2		Cpool_3		Cpool_4	
Min.	:0.05132	Min.	:0.05132	Min.	:0.05132	Min.	:0.05004
1st Qu.	:1.13856	1st Qu.	:1.13856	1st Qu.	:1.13856	1st Qu.	:0.84146
Median	:1.58328	Median	:1.58328	Median	:1.58328	Median	:1.27413
Mean	**:1.78372**	**Mean**	**:1.78372**	**Mean**	**:1.78372**	**Mean**	**:1.44003**
3rd Qu.	:2.14707	3rd Qu.	:2.14707	3rd Qu.	:2.14707	3rd Qu.	:1.80967
Max.	:6.24896	Max.	:6.24896	Max.	:6.24896	Max.	:5.04733

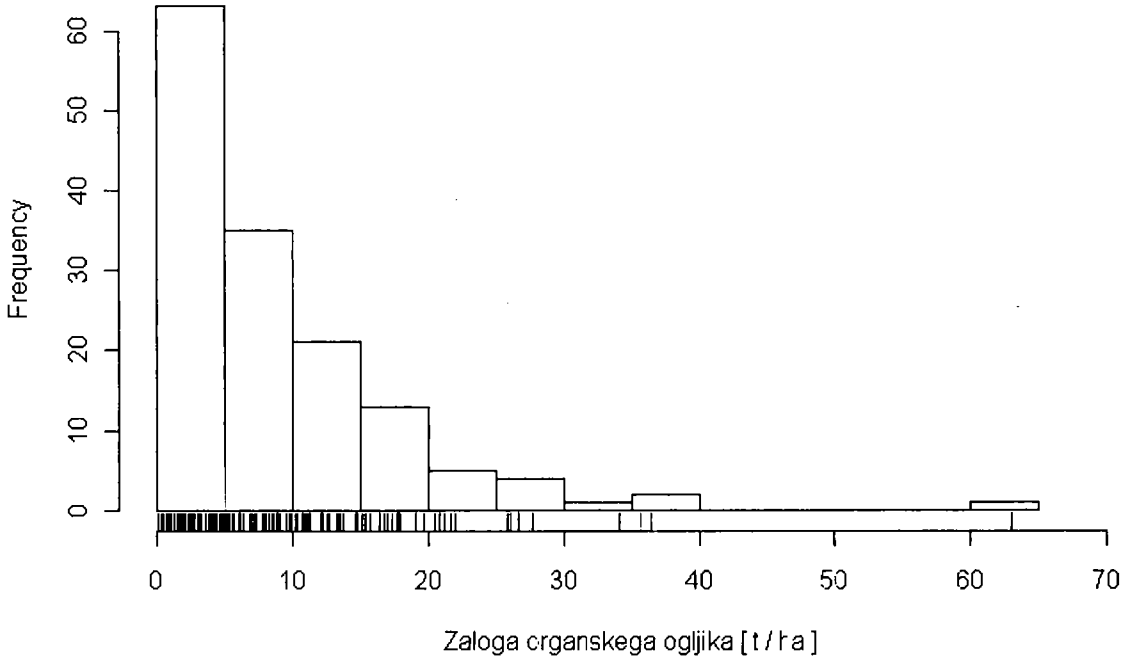


Slika 17: Frekvenčna porazdelitev organskega ogljika na lokacijah.



Slika 18: Razporeditev zaloge organskega ogljika v O_l horizontu. Velikost simbola prikazuje vrednost.

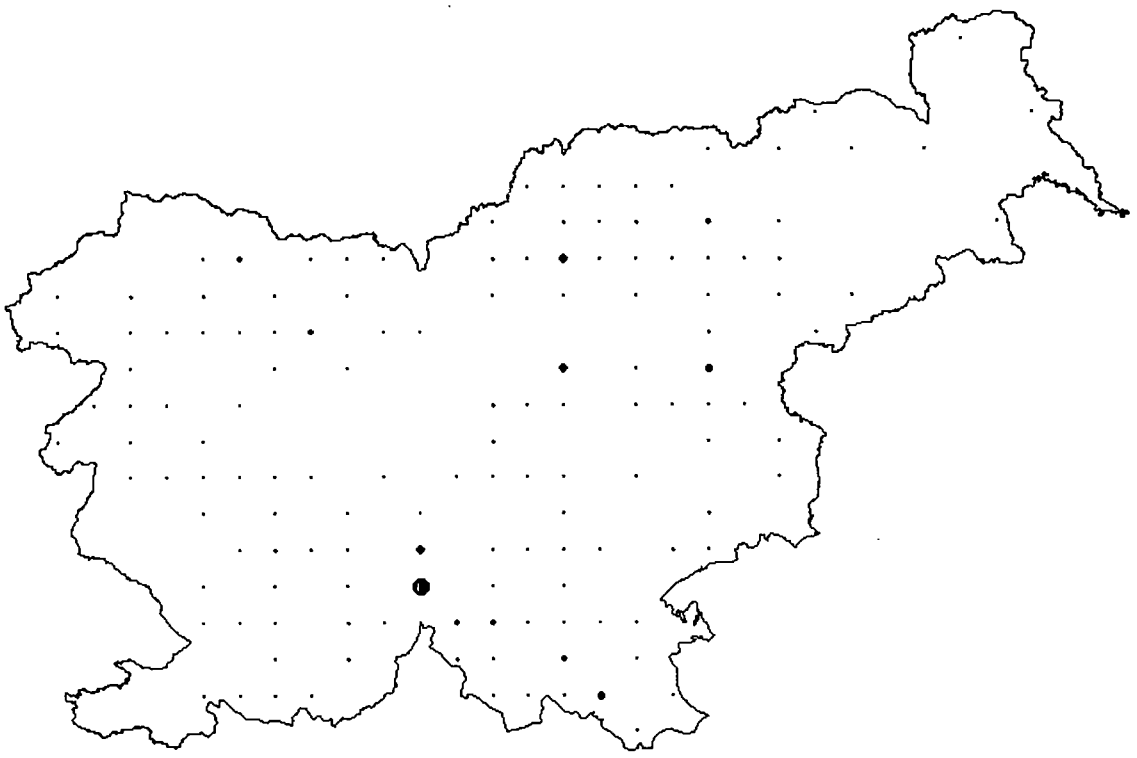
4.2.2 O_{fh} horizont



Slika 19: Frekvenčna porazdelitev organskega ogljika na lokacijah.

Povprečna zaloga organskega ogljika v O_{fh} horizontu (n = 145) je 8.85 ± 1.42 t/ha.

Cpool_1	Cpool_2	Cpool_3	Cpool_4
Min. : 0.7038	Min. : 0.7038	Min. : 0.7038	Min. : 0.1266
1st Qu.: 4.3513	1st Qu.: 4.3513	1st Qu.: 4.3513	1st Qu.: 2.9463
Median : 8.3660	Median : 8.3660	Median : 8.3660	Median : 6.0449
Mean :10.8507	**Mean :10.8507**	**Mean :10.8507**	**Mean : 8.8546**
3rd Qu.:13.6634	3rd Qu.:13.6634	3rd Qu.:13.6634	3rd Qu.:12.1105
Max. :76.8816	Max. :76.8816	Max. :76.8816	Max. :63.0429

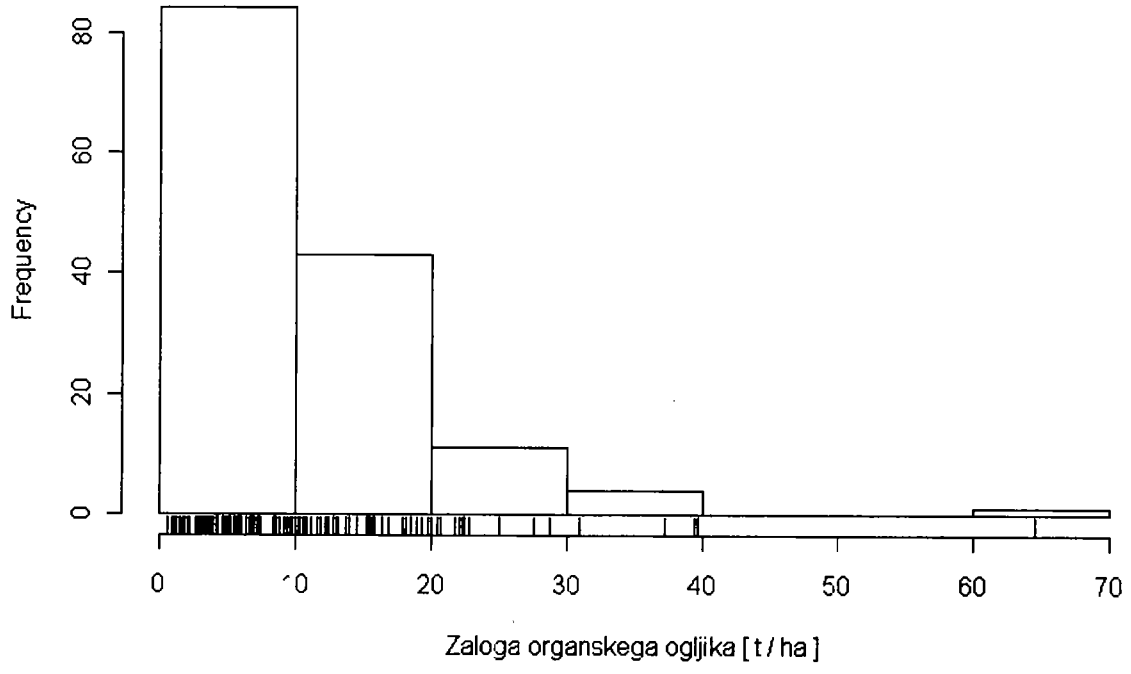


Slika 20: Razporeditev zaloge organskega ogljika v O_{fh} horizontu. Velikost simbola prikazuje vrednost.

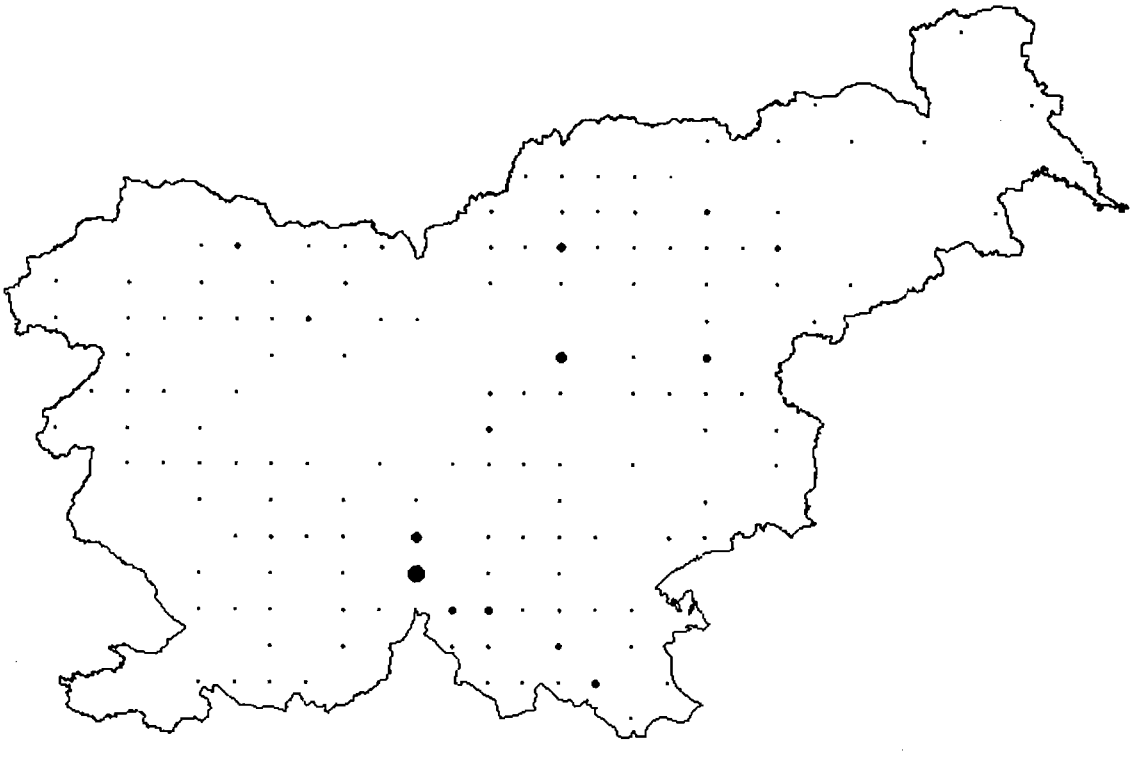
4.2.3 $O_l + O_{fh}$ horizonta skupaj

Povprečna zaloga organskega ogljika v $O_l + O_{fh}$ horizontu (n = 143) je 10.41 ± 1.50 t/ha.

Cpool_1	Cpool_2	Cpool_3	Cpool_4
Min. : 1.479	Min. : 1.479	Min. : 1.479	Min. : 0.5342
1st Qu.: 5.806	1st Qu.: 5.806	1st Qu.: 5.806	1st Qu.: 4.1456
Median :10.389	Median :10.389	Median :10.389	Median : 7.1963
Mean :12.744	**Mean :12.744**	**Mean :12.744**	**Mean :10.4145**
3rd Qu.:16.425	3rd Qu.:16.425	3rd Qu.:16.425	3rd Qu.:13.8341
Max. :78.703	Max. :78.703	Max. :78.703	Max. :64.5361



Slika 21: Frekvenčna porazdelitev organskega ogljika na lokacijah.

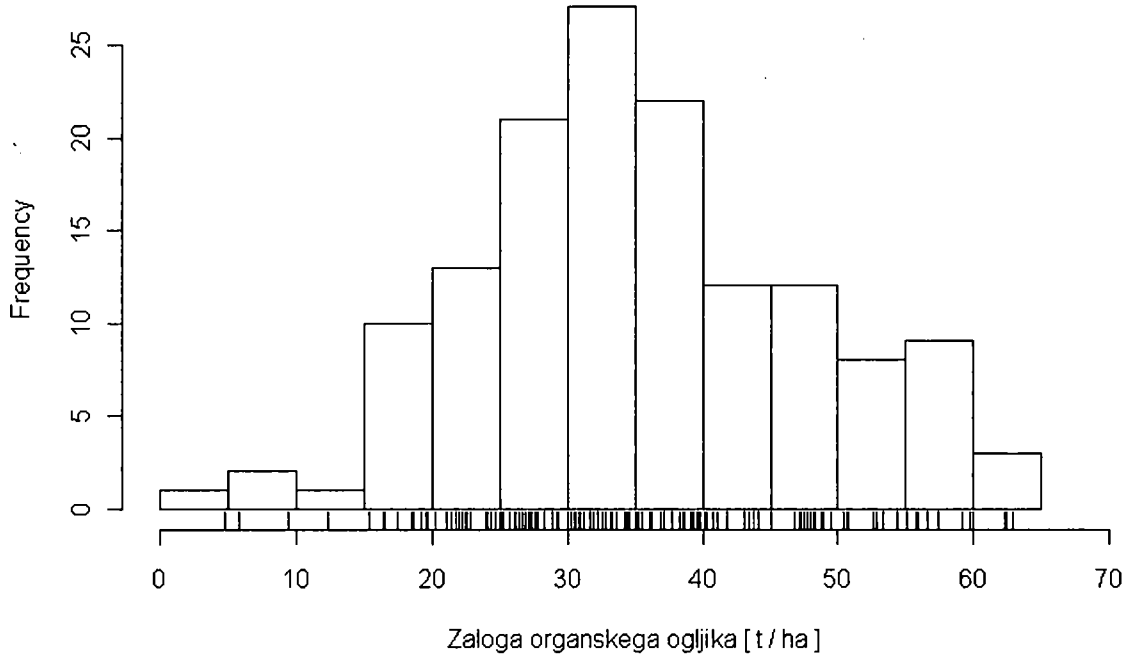


Slika 22: Razporeditev zalcge organskega ogljika v $O_l + O_{fh}$ horizontu. Velikost simbola prikazuje vrednost.

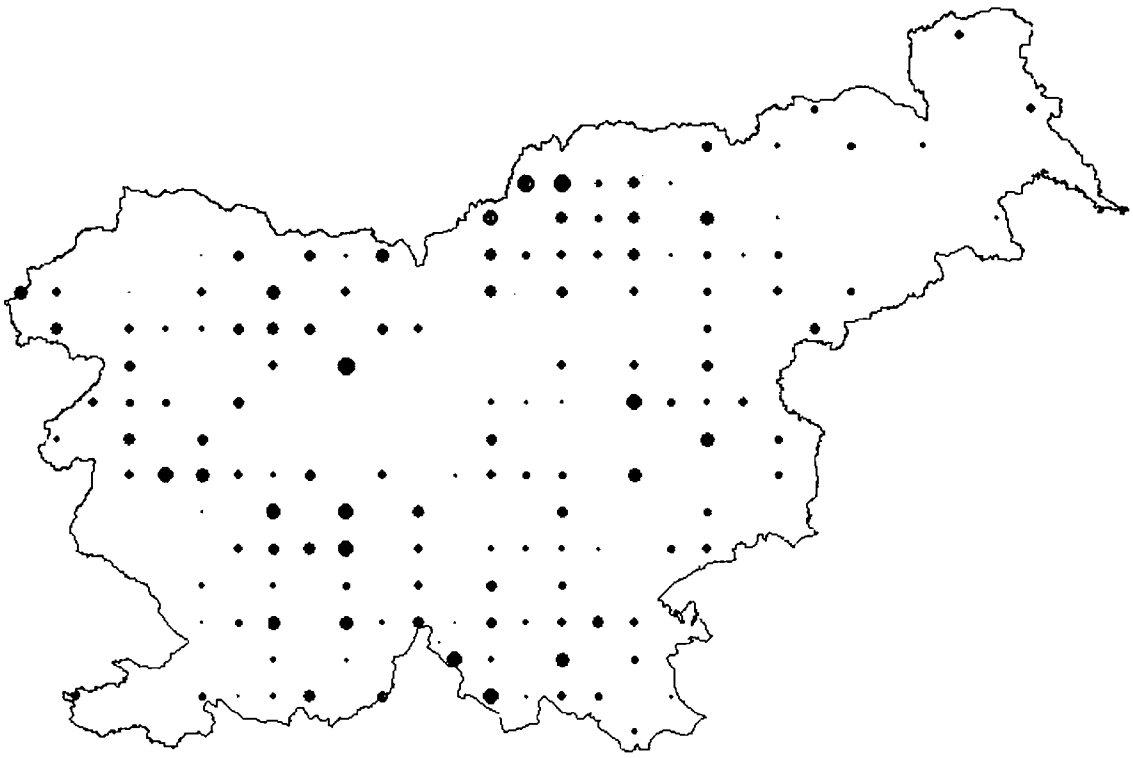
4.2.4 **Plast M_{10}**

Povprečna zaloga organskega ogljika v plasti M_{10} (n = 141) je 35.25 ± 2.06 t/ha.

Cpool_1	Cpool_2	Cpool_3	Cpool_4
Min. :16.37	Min. :16.37	Min. :16.37	Min. : 4.799
1st Qu.:31.01	1st Qu.:28.83	1st Qu.:28.83	1st Qu.:26.643
Median :40.68	Median :38.33	Median :38.33	Median :34.191
Mean :42.48	**Mean :39.56**	**Mean :39.52**	**Mean :35.255**
3rd Qu.:52.68	3rd Qu.:48.37	3rd Qu.:48.21	3rd Qu.:43.441
Max. :69.72	Max. :66.06	Max. :66.06	Max. :62.862

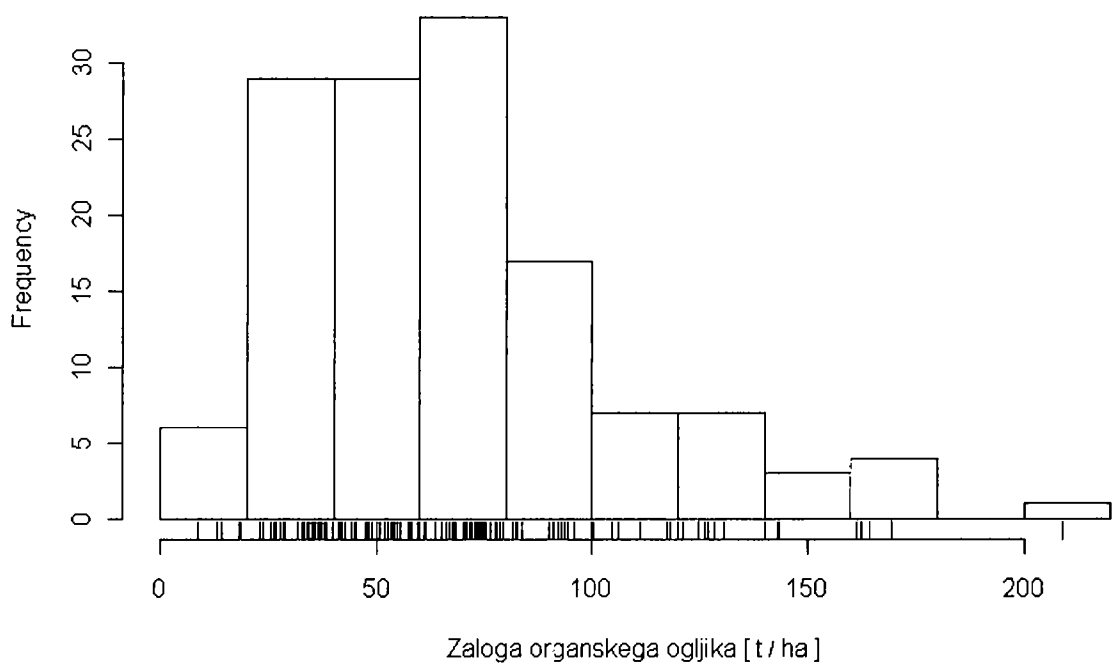


Slika 23: Frekvenčna porazdelitev organskega ogljika na lokacijah.



Slika 24: Razporeditev zaloge organskega ogljika v globini 0-10 cm. Velikost simbola prikazuje vrednost.

4.2.5 **Plast M_{40}**



Slika 25: Frekvenčna porazdelitev organskega ogljika na lokacijah.

Povprečna zaloga organskega ogljika v plasti M_{40} horizontu (n = 136) je 68.32 ± 6.22 t/ha.

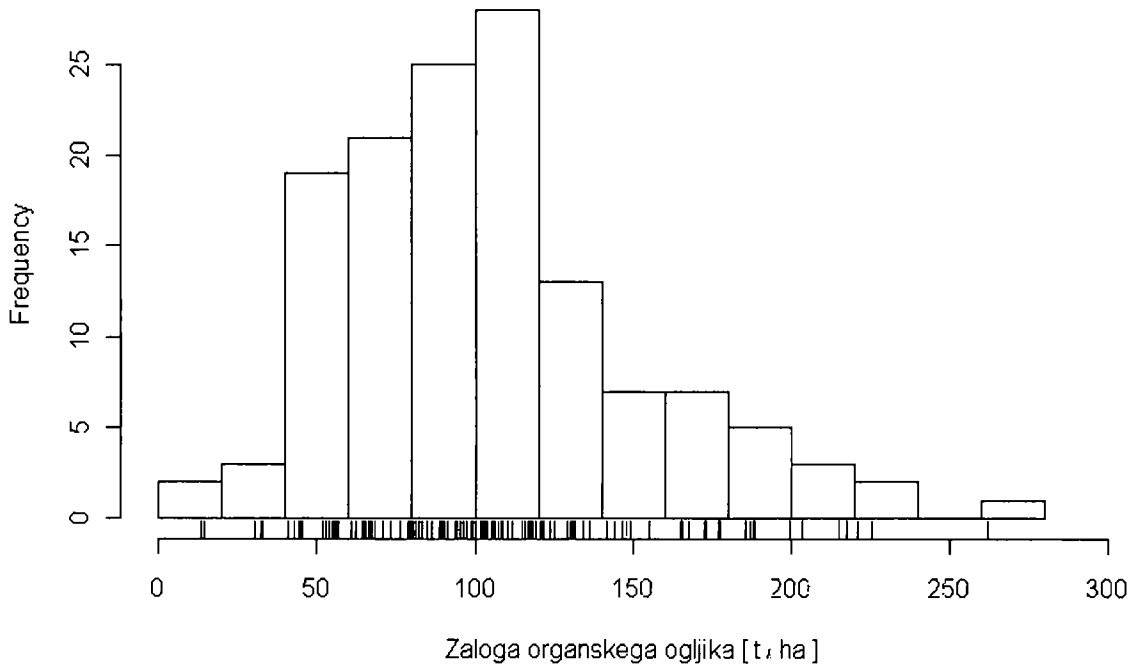
Cpool_1		Cpool_2		Cpool_3		Cpool_4	
Min.	: 13.61	Min.	: 13.26	Min.	: 13.26	Min.	: 8.638
1st Qu.	: 48.82	1st Qu.	: 46.40	1st Qu.	: 46.22	1st Qu.	: 39.402
Median	: 76.23	Median	: 72.08	Median	: 71.95	Median	: 64.429
Mean	**: 83.62**	**Mean**	**: 76.83**	**Mean**	**: 76.69**	**Mean**	**: 68.316**
3rd Qu.	:104.90	3rd Qu.	: 95.05	3rd Qu.	: 94.92	3rd Qu.	: 85.350
Max.	:210.04	Max.	:209.13	Max.	:209.13	Max.	:209.131

Slika 26: Razporeditev zaloge organskega ogljika v globini 10-40 cm. Velikost simbola prikazuje vrednost.

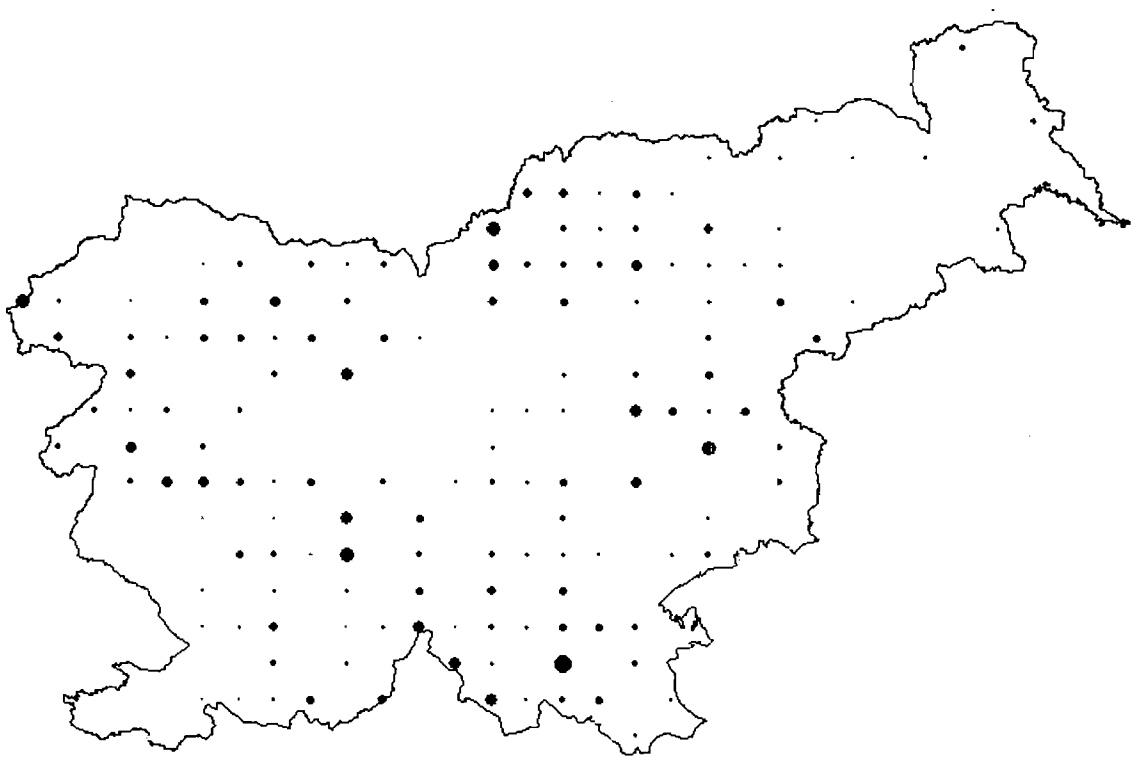
4.2.6 **Plast M_{10} + M_{40}**

Povprečna zaloga organskega ogljika v globini do 40 cm (n = 136) je 103.31 ± 7.90 t/ha.

Cpool_1		Cpool_2		Cpool_3		Cpool_4	
Min.	: 30.48	Min.	: 30.46	Min.	: 30.46	Min.	: 13.49
1st Qu.	: 85.17	1st Qu.	: 79.70	1st Qu.	: 79.69	1st Qu.	: 67.25
Median	:113.29	Median	:106.10	Median	:105.99	Median	: 98.09
Mean	**:125.43**	**Mean**	**:115.73**	**Mean**	**:115.55**	**Mean**	**:103.31**
3rd Qu.	:151.62	3rd Qu.	:138.93	3rd Qu.	:138.68	3rd Qu.	:123.95
Max.	:273.35	Max.	:262.12	Max.	:261.99	Max.	:261.99



Slika 27: Frekvenčna porazdelitev organskega ogljika na lokacijah.

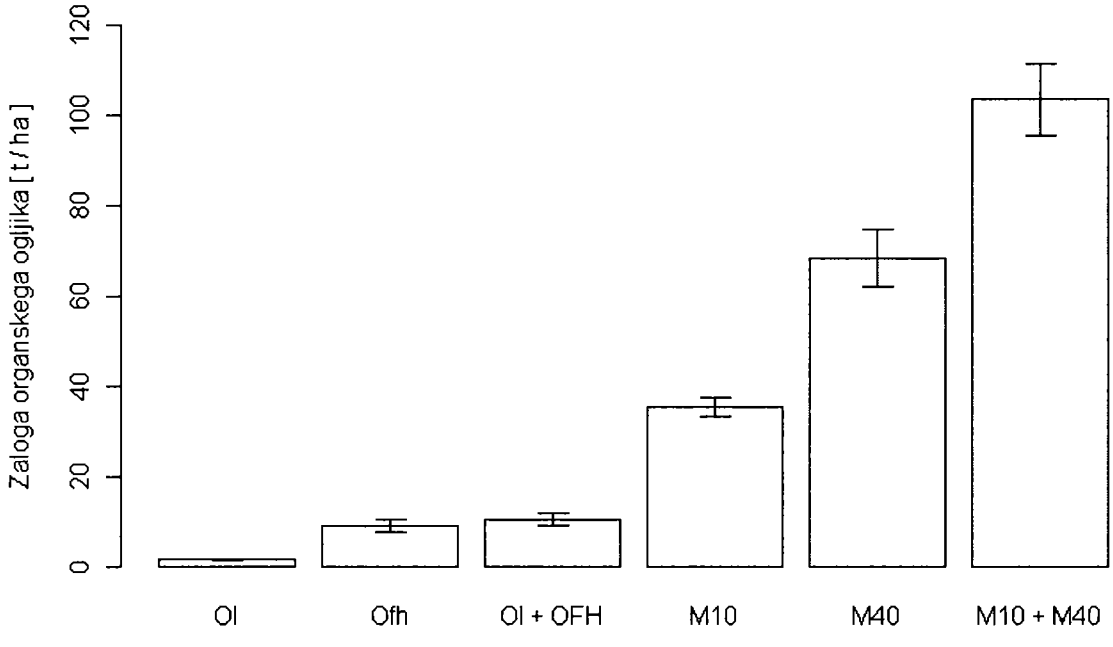


Slika 28: Razporeditev zaloge organskega ogljika v globini 0-40 cm. Velikost simbola prikazuje vrednost.

4.3 KONČNI REZULTATI

Podane so povprečne vrednosti (aritmetična sredina) ter 95 % interval zaupanja.

- Povprečna zaloga organskega ogljika v O_l horizontu (n = 143) je 1.44 ± 0.15 t/ha.
- Povprečna zaloga organskega ogljika v O_{fh} horizontu (n = 145) je 8.85 ± 1.42 t/ha.
- Povprečna zaloga organskega ogljika v $O_l + O_{fh}$ horizontu (n = 143) je 10.41 ± 1.50 t/ha.
- Povprečna zaloga organskega ogljika v plasti M_{10} (n = 141) je 35.25 ± 2.06 t/ha.
- Povprečna zaloga organskega ogljika v plasti M_{40} horizontu (n = 136) je 68.32 ± 6.22 t/ha.
- Povprečna zaloga organskega ogljika v globini do 40 cm (n = 136) je 103.31 ± 7.90 t/ha.



Slika 29: Povprečne vrednosti zaloge organskega ogljika po posameznih horizontih oz. plasteh tal.

JRC technical workshop on LULUCF issues under the Kyoto Protocol

organized by the Joint Research Centre of the European Commission

Brussels, 21 November 2011

Avenue de Beaulieu 33, 1160 Auderghem, Building BU33 , Room 0/54

LULUCF technical workshop is being annually organized by Joint Research Center since 2006 with the purpose to support the improvement of the reporting under the requirements of the UNFCCC and its Kyoto Protocol. Also this year, the workshop aims to gather experts from EU MS and other countries to share their experience and discuss key issues emerged during the EU QA/QC and UNFCCC review process.

The workshop also aims to assess the needs emerging from MS and the possible contribution that JRC could provide in coming years in terms of expertise/datasets/information.

Expected participants include national experts responsible for the LULUCF sector, inventory compilers and scientists involved in the estimation and reporting of LULUCF.

Workshop agenda

9.30 – 10.30	**Reporting issues under the UNFCCC and its Kyoto Protocol** • Introduction (Giacomo Grassi and Viorel Blujdea, JRC) • Overview of the LULUCF and KP-LULUCF issues in the 2011 review cycle of the UNFCCC (Javier Hanna, UNFCCC) • Overview of MS' LULUCF GHG inventories and common problems identified during the EU QA/QC (Viorel Blujdea and Giacomo Grassi, JRC)
10.30 - 10.50	Coffee break
10.50 - 13.00	**Reporting C stock changes in soils** • BioSoil: Demonstration Project for Monitoring European Forest Soils and Biodiversity (Roland Hiederer, JRC) • Greenhouse gas budget of soils under changing climate and land use : experience from Cost action 639 "burnout" (Mirko Rodegheiro, IASMA, Italy) • Preliminary screening of recent scientific literature to support KP LULUCF reporting (Viorel Blujdea, JRC) • Discussion to improve KP reporting: decision tree on reporting "not a source"
13.00 - 14.30	Lunch break
14.30 - 16.30	**Presentations by countries** • Improving sample based KP- reporting - a challenge for countries using cyclic inventories (Matthias Lundblad and Hans Petersson, Sweden) • Integration of heterogeneous data sources for land use cover determination (Volker Mues, Germany) • Modifications in the German LULUCF-Inventory 2012 compared to previous years (Andreas Gensior and W. Stümer, Germany)

	• Recent innovations for LULUCF, the UK experience (Steve Hallsworth, UK) • Bulgarian KP-LULUCF issue included in the Saturday paper (Lora Petrova, Bulgaria) • Swiss experience with KP-reporting (Nele Rogiers, Switzerland) • Possible other short presentations from the countries • Discussions/questions
16.30 - 17.00	Workshop conclusions

Highlights of the presentations

R. Hiederer (JRC): BioSoil: Demonstration Project for Monitoring European Forest Soils and Biodiversity. BioSoil provides most comprehensive and recent (2006) survey of assessing soil conditions in European forest. It demonstrated the feasibility of a common approach to large-scale sampling and analysing soil physical properties and can form a baseline for estimating soil organic carbon stocks. It can form a suitable basis for a forest soil monitoring system to improve the estimation of changes in soil organic carbon stocks and support reporting of such changes for mineral soil under Tier 3.

V. Blujdea (JRC): Screening the recent scientific research results on soil related C pools – support for KP reporting. Reporting removals or emissions from slowly changing pools is a challenge. Scientific literature screening offers valuable approaches of robust methods for utilizing available datasets and hopefully sound information that could help building reasoning behind "not a source".

M. Lundblad and H. Petersson (SW): Improving sample based KP-reporting - a challenge for countries using cyclic inventories. As many other European countries, Sweden uses the by IPCC recommended five-year inventory cycle for both the KP and UNFCCC-reporting. With the intention to improve the accuracy of estimates, every year one cycle is re-inventoried and five years are re-calculated with new data. In submission 2012, all estimates are based on around 30000 sample plots 1990-2006 but for years 2007, 2008, 2009 and 2010 on around 24000, 18000, 12000 and 6000 sample plots, respectively. This implies that the uncertainty of estimates increases for the most recent years and that is why we re-calculate until the estimate for a specific year is based on all, around 30000, sample plots. At the time for the final submission under KP (Submission 2014), we will not have a full record of re-inventoried sample plots for the years 2009-2012. There are several options to improve the estimates, mainly by extrapolations and/or additional inventories. This problem is probably relevant for many European countries and, for example, both Sweden and Finland have already ongoing projects studying this matter. We suggest making a short presentation introducing the problem and discussing some potential solutions based on current experience (also including the use of remote sensing).

V. Mues (DE): Integration of heterogeneous data sources for land use cover determination. Natural and anthropogenic processes are reflected in land cover development. Usually, land cover at a specific time is determined by an appropriate survey, repeated surveys enable the assessment of land cover development. Those surveys are designed with respect to the objective of the specific investigation. Hence, surveys from various investigations may differ in definition of land cover classes, spatial accuracy, area under investigation, or number of repetitions. A method for a transparent integration of heterogeneous surveys in a consistent land cover development is presented.

A.Gensior and W. Stümer (DE): Modifications in the German LULUCF-Inventory 2012 compared to previous years. In the presentation we will show the modifications which we carried out for the 2012 submission, the reasons why and their impact on the calculated emissions. The modifications cause nearly a complete change of the LULUCF reporting system concerning the sectors 5.B – 5.F The major changes have been: i) replacement from the wall to wall approach to a raster point approach for the identification and designation of land and land use; ii) implementation of a transition time for all land use categories, iii) simplification of the reporting system on mineral soils and iv) implementation of new country specific emission factors for mineral soils and biomass.

S. Hallsworth (UK): Recent innovations for LULUCF, the UK experience. Land use change is currently estimated from spatially and temporally sparse surveys (approximately 0.2% of the UK area surveyed and only around once per decade). We show how we derive land use change for the whole country from this data and introduce the land cover map to intimate how this could improve the accuracy of the estimates. We also present our move from a fixed date definition of old and new fluxes (1990), for afforestation and land use change, to a moving date (20 year transition).

Nele Rogiers (CH) Swiss Experience with KP-reporting. Modeling soil-C with Yasso07 for reporting Forest management activity: model assumptions and application of model output for KP-Reportig. Second issue is on Soil-C-dynamics after afforestation in Switzerland.

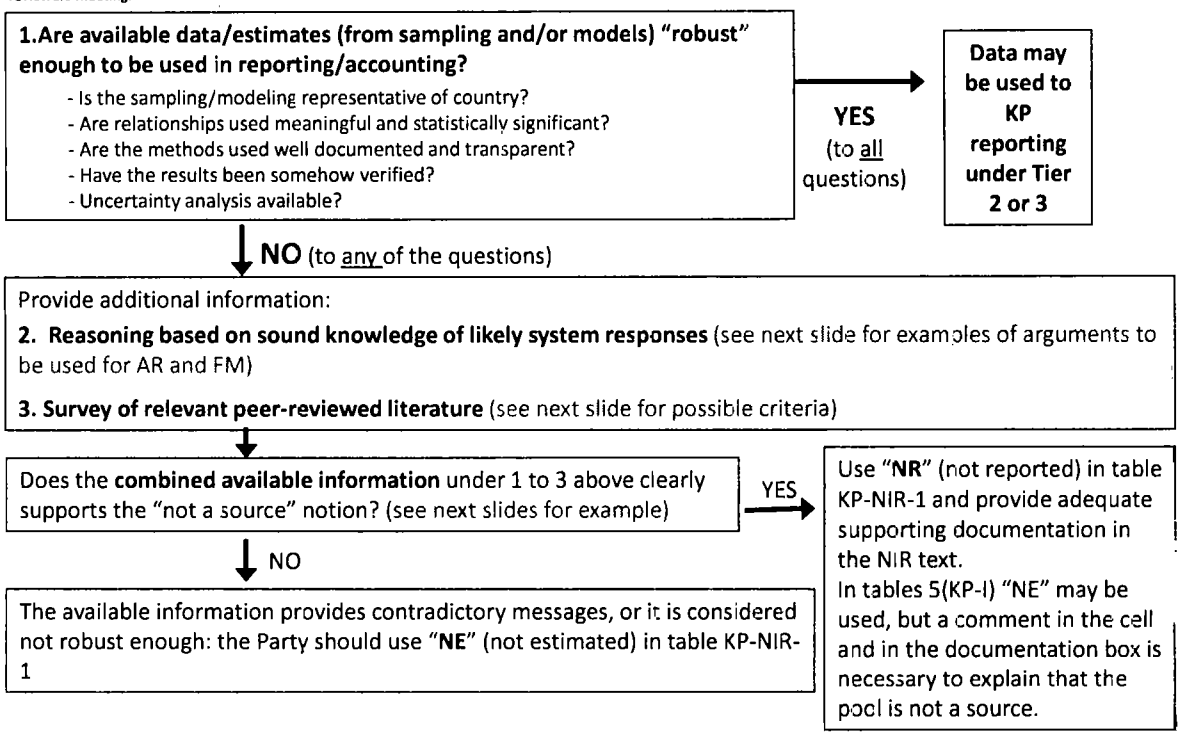
Conference room location (map)

Avenue de Beaulieu 33, 1160 Auderghem, Building BU33 , Room 0/54

Closest metro stop is **Beaulieu** on line M5.

Pools to be reported under KP-LULUCF*: decision tree

(note: this is a general guidance for MS, which of course should be compared to the ERT's assessment of the "yes" and "no" in the tree)
As general rule this decision tree should be applied to each individual C pool. During the meeting there has been some discussion on the possibility to provide evidence that combined pools (e.g. LT and SOM) are not a source when taken together. However, different views on this emerged from participants (apparently the semantic used in relevant provisions favor reporting and accounting on "individual pools", but transparent reporting was highlighted as key for the concerned approach). We will ask to discuss this issue at the next Lead reviewers meeting.



* In some case (e.g., mineral soil in FM) tier 1 assumes no C stock change. However, as general rule, Tier 1 can be used ONLY for non key categories.

Climate Change Policy

JRC technical workshop on LULUCF issues under the Kyoto Protocol

Organized by the Joint Research Centre of the European Commission

Brussels, 21 November 2011
Avenue de Beaulieu 33, 1160 Auderghem, Building BU33 , Room 0/54

LULUCF technical workshop is being annually organized by Joint Research Center since 2006 with the purpose to support the improvement of the reporting under the requirements of the UNFCCC and its Kyoto Protocol. Also this year, the workshop aims to gather experts from EU MS and other countries to share their experience and discuss key issues emerged during the EU QA/QC and UNFCCC review process.

The workshop also aims to assess the needs emerging from MS and the possible contribution that JRC could provide in coming years in terms of expertise/datasets/information.

Expected participants include national experts responsible for the LULUCF sector, inventory compilers and scientists involved in the estimation and reporting of LULUCF.

Attachments

- Agenda and Topics
- Participants
- Decision Tree

Workshop agenda

Reporting issues under the UNFCCC and its Kyoto Protocol	ppt	pdf
Introduction (Giacomo Grassi and Viorel Blujdea, JRC)		
Overview of the LULUCF and KP-LULUCF issues in the 2011 review cycle of the UNFCCC (Javier Hanna, UNFCCC)		
Overview of MS' LULUCF GHG inventories and common problems identified during the EU QA/QC (Viorel Blujdea and Giacomo Grassi, JRC)		
Reporting C stock changes in soils	**ppt**	**pdf**
BioSoil: Demonstration Project for Monitoring European Forest Soils and Biodiversity (Roland Hiederer, JRC)		
Greenhouse gas budget of soils under changing climate and land use: experience from Cost action 639 "burnout" (Mirko Rodeghiro, IASMA, Italy)		

2011 review cycle of the UNFCCC (Javier Hanna, UNFCCC)		
Overview of MS' LULUCF GHG inventories and common problems identified during the EU QA/QC (Viorel Blujdea and Giacomo Grassi, JRC)		
Reporting C stock changes in soils	**ppt**	**pdf**
BioSoil: Demonstration Project for Monitoring European Forest Soils and Biodiversity (Roland Hiederer, JRC)		
Greenhouse gas budget of soils under changing climate and land use: experience from Cost action 639 "burnout" (Mirko Rodeghiro, IASMA, Italy)		
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Presentations by countries	**ppt**	**pdf**
Improving sample based KP- reporting - a challenge for countries using cyclic inventories (Matthias Lundblad and Hans Petersson, Sweden)		
Integration of heterogeneous data sources for land use cover determination (Volker Mues, Germany)		
Modifications in the German LULUCF-Inventory 2012 compared to previous years (Andreas Gensior and W. Stümer, Germany)		
Recent innovations for LULUCF, the UK experience (Steve Hallsworth, UK)		
Bulgarian KP-LULUCF issue included in the Saturday paper (Lora Petrova, Bulgaria)		
Swiss experience with KP-reporting (Nele Rogiers, Switzerland)		

CONTENTS

TABLE NIR 1. SUMMARY TABLE

Activity coverage and other information relating to activities under Article 3.3 and elected activities under Article 3.4

Activity		Change in carbon pool reported[1]					Greenhouse gas sources reported[2]						
		Above-ground biomass	Below-ground biomass	Litter	Dead wood	Soil	Fertilization[3]	Drainage of soils under forest management	Disturbance associated with land-use conversion to croplands	Liming	Biomass burning[4]		
							N_2O	N_2O	N_2O	CO_2	CO_2	CH_4	N_2O
Article 3.3 activities	Afforestation and Reforestation	NO	NO	NO	NO	NO	NO			NO	NO	NO	NO
	Deforestation	R	R	R	R	R			R	NO	NO	NO	NO
Article 3.4 activities	Forest Management	R	R	NR	R	NR	NO	NO		NO	R	R	R
	Cropland Management	NA	NA	NA	NA	NA			NA	NA	NA	NA	NA
	Grazing Land Management	NA	NA	NA	NA	NA				NA	NA	NA	NA
	Revegetation	NA	NA	NA	NA	NA				NA	NA	NA	NA

[1] Indicate R (reported), NR (not reported), IE (included elsewhere) or NO (not occurring), for each relevant activity under Article 3.3 or elected activity under Article 3.4. If changes in a carbon pool are not reported, it must be demonstrated in the NIR that this pool is not a net source of greenhouse gases. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the text.

[2] Indicate R (reported), NE (not estimated), IE (included elsewhere) or NO (not occurring) for greenhouse gas sources reported, for each relevant activity under Article 3.3 or elected activity under Article 3.4. Indicate NA (not applicable) for each activity that is not elected under Article 3.4. Explanation about the use of notation keys should be provided in the text.

[3] N_2O emissions from fertilization for Cropland Management, Grazing Land Management and Revegetation should be reported in the Agriculture sector. If a Party is not able to separate fertilizer applied to Forest Land from Agriculture, it may report all N_2O emissions from fertilization in the Agriculture sector.

[4] If CO_2 emissions from biomass burning are not already included under changes in carbon stocks, they should be reported under biomass burning; this also includes the carbon component of CH_4. Parties that include CO_2 emissions from biomass burning in their carbon stock change estimates should report IE (included elsewhere).

Table NIR 1.1 Additional information

Selection of parameters for defining "Forest"under the Kyoto Protocol

Parameter	Range	Selected value

Minimum land area	0.05 - 1 ha	0.25
Minimum crown cover	10 - 30 %	30.00
Minimum height	2 - 5 m	2.00

Table NIR 2. LAND TRANSITION MATRIX

Areas and changes in areas between the previous and the current inventory year [1], [2], [3]

From previous inventory year \ To current inventory year		Article 3.3 activities		Article 3.4 activities				Other [5]	Total area at the beginning of the current inventory year [6]
		Afforestation and Reforestation	Deforestation	Forest Management (if elected)	Cropland Management (if elected)	Grazing Land Management (if elected)	Revegetation (if elected)		
		(kha)							
Article 3.3 activities	Afforestation and Reforestation	0.00	0.00						0.00
	Deforestation		5.33						5.33
Article 3.4 activities	Forest Management (if elected)		0.72	1,185.17					1,185.89
	Cropland Management [4] (if elected)	NA	NA		NA	NA	NA		NA
	Grazing Land Management [4] (if elected)	NA	NA		NA	NA	NA		NA
	Revegetation [4] (if elected)	NA			NA	NA	NA		NA
Other [5]		NA	NA	0.00	NA	NA	NA	836.08	836.08
Total area at the end of the current inventory year		0.00	6.05	1,185.17	NA	NA	NA	836.08	2,027.30

[1] This table should be used to report land area and changes in land area subject to the various activities in the inventory year. For each activity it should be used to report area change between the previous year and the current inventory year. For example, the total area of land subject to Forest Management in the year preceding the inventory year, and which was deforested in the inventory year, should be reported in the cell in column of Deforestation and in the row of Forest Management.

[2] Some of the transitions in the matrix are not possible and the cells concerned have been shaded.

[3] In accordance with section 4.2.3.2 of the IPCC good practice guidance for LULUCF, the value of the reported area subject to the various activities under Article 3.3 and 3.4 for the inventory year should be that on 31 December of that year.

[4] Lands subject to Cropland Management, Grazing Land Management or Revegetation which, after 2008, are subject to activities other than those under Article 3.3 and 3.4, should still be tracked and reported under Cropland Management, Grazing Land Management or Revegetation, respectively.

[5] "Other" includes the total area of the country that has not been reported under an Article 3.3 or an elected Article 3.4 activity.

[6] The value in the cell of row "Total area at the end of the current inventory year" corresponds to the total land area of a country and is constant for all years.

TABLE NIR 3. SUMMARY OVERVIEW FOR KEY CATEGORIES FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

KEY CATEGORIES OF EMISSIONS AND REMOVALS	GAS	CRITERIA USED FOR KEY CATEGORY IDENTIFICATION			COMMENTS [3]
		Associated category in UNFCCC inventory[1] is key (indicate which category)	Category contribution is greater than the smallest category considered key in the UNFCCC inventory [1],[4] (including LULUCF)	Other [2]	
Specify key categories according to the national level of disaggregation used[1]					
Forest Management	CO2	Forest land remaining forest land	Yes	No other criteria needed her	NO
Deforestation	CO2	Conversion to grassland	Yes	No other criteria.	NO

[1] See section 5.4 of the IPCC good practice guidance for LULUCF.

[2] This should include qualitative consideration as per section 5.4.3 of the IPCC good practice guidance for LULUCF or any other criteria.

[3] Describe the criteria identifying the category as key.

[4] If the emissions or removals of the category exceed the emissions of the smallest category identified as key in the UNFCCC inventory (including LULUCF), Parties should indicate YES. If not, Parties should indicate NO.

TABLE 5(KP). REPORT OF SUPPLEMENTARY INFORMATION FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL [1], [2]

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	Net CO_2 emissions/ removals [3], [4]	CH_4 [5]	N_2O [6]	Net CO_2 equivalent emissions/removals
	(Gg)			
A. Article 3.3 activities				**359.43**
A.1. Afforestation and Reforestation [7]	NO	NO	NO	NO
A.1.1. Units of land not harvested since the beginning of the commitment period	NO	NO	NO	NO
A.1.2. Units of land harvested since the beginning of the commitment period	NO	NO	NO	NO
A.2. Deforestation	356.86	NO	0.01	359.43
B. Article 3.4 activities				**-10,307.99**
B.1. Forest Management (if elected)	-10,309.16	0.05	0.00	-10,307.99
B.2. Cropland Management (if elected)	NA	NA	NA	NA
B.3. Grazing Land Management (if elected)	NA	NA	NA	NA
B.4. Revegetation (if elected)	NA	NA	NA	NA

Information item:				
A.1.2. Units of land harvested since the beginning of the commitment period	NO	NO	NO	NO
99-national	NO	NO	NO	NO

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

KP.A.2 Deforestation/2010:Area of deforestation under KP is not the same as sum of areas forest land converted to other land uses reported under Convention, due to different methodological approaches. All deforestated areas are spatially located (geo-referenced) and are documented in annual report of Slovenia Forest Service. Land use change matrix consists of land use changes in longer time period. Average annual changes are then calculated.

(1) All estimates in this table include emissions and removals from projects under Article 6 hosted by the reporting Party.

(2) If Cropland Management, Grazing Land Management and/or Revegetation are elected, this table and all relevant CRF tables should also be reported for the base year for these activities.

(3) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and by changing the sign for net CO_2 removals to be negative (-) and net CO_2 emissions to be positive (+).

(4) CO_2 emissions from liming, biomass burning and drained organic soils, where applicable, are included in this column.

(5) CH_4 emissions reported here for Cropland Management, Grazing Land Management and Revegetation, if elected, include only emissions from biomass burning (with the exception of savannah burning and agricultural residue burning which are reported in the Agriculture sector). Any other CH_4 emissions from Agriculture should be reported in the Agriculture sector.

(6) N_2O emissions reported here for Cropland Management, if elected, include only emissions from biomass burning (with the exception of savannah burning and agricultural residue burning which are reported in the Agriculture sector) and N_2O emissions from mineral soils from conversion to Cropland of lands other than Forest Land (Table 5(KP-II)3). Any other N_2O emissions from Agriculture should be reported in the Agriculture sector.

(7) As both Afforestation and Reforestation under Article 3.3 are subject to the same provisions specified in the annex to decision 16/CMP.1, they can be reported together.

TABLE 5(KP-I)A.1.1. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Article 3.3 activities: Afforestation and Reforestation [1], [2]

Units of land not harvested since the beginning of the commitment period

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GEOGRAPHICAL LOCATION [3]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [7]										Implied emission/ removal factor per area [9]	CHANGE IN CARBON STOCK [7]										Net CO_2 emissions/ removals [9]
				Carbon stock change in above-ground biomass per area [5], [6]			Carbon stock change in below-ground biomass per area [5], [6]			Net carbon stock change in litter per area [5]	Net carbon stock change in dead wood per area [5]	Net carbon stock change in soils per area [5]			Carbon stock change in above-ground biomass [5], [6]			Carbon stock change in below-ground biomass [5], [6]			Net carbon stock change in litter [5]	Net carbon stock change in dead wood [5]	Net carbon stock change in soils [5]		
Identification code	Subdivision [4]	Area subject to the activity	Area of organic soils [8]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils [10]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity A.1.1		**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
99-national		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	land converted to forestland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) Report here information on anthropogenic change in carbon stock for the inventory year for all geographical locations that encompass units of land subject to Afforestation and Reforestation under Article 3.3 not harvested since the beginning of the commitment period.

(2) As both Afforestation and Reforestation under Article 3.3 are subject to the same provisions specified in the annex to decision 16/CMP.1, they can be reported together.

(3) Geographical location refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation.

(4) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(5) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(6) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses

(7) Note that net change corresponds to increase/decrease of carbon stock (see table 4.2.6a of the IPCC good practice guidance for LULUCF).

(8) This information is needed for the calculation of the net carbon stock changes in soils per area.

(9) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

(10) The value reported here is an emission and not a carbon stock change.

TABLE 5(KP-I)A.1.2. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Article 3.3 activities: Afforestation and Reforestation [1], [2]

Units of land harvested since the beginning of the commitment period

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GEOGRAPHICAL LOCATION [3]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [7]											CHANGE IN CARBON STOCK [7]										
				Carbon stock change in above-ground biomass per area [5], [6]			Carbon stock change in below-ground biomass per area [5], [6]			Net carbon stock change in litter per area [5]	Net carbon stock change in dead wood per area [5]	Net carbon stock change in soils per area [5]		Implied emission/ removal factor per area [9]	Carbon stock change in above-ground biomass [5], [6]			Carbon stock change in below-ground biomass [5], [6]			Net carbon stock change in litter [5]	Net carbon stock change in dead wood [5]	Net carbon stock change in soils [5]		Net CO_2 emissions/ removals [9]
Identification code	Subdivision [4]	Area subject to the activity	Area of organic soils [8]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils [10]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity A.1.2		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
99-national		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	land converted to forestland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) Report here information on anthropogenic change in carbon stock for the inventory year for all geographical locations that encompass units of land subject to Afforestation and Reforestation under Article 3.3 harvested since the beginning of the commitment period.

(2) As both Afforestation and Reforestation under Article 3.3 are subject to the same provisions specified in the annex to draft decision 16/CMP.1, they can be reported together.

(3) Geographical location refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation.

(4) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(5) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(6) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be

(7) Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6a of the IPCC good practice guidance for LULUCF).

(8) This information is needed for the calculation of the net carbon stock changes in soils per area.

(9) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

(10) The value reported here is an emission and not a carbon stock change.

TABLE 5(KP-I)A.1.3. SUPPLEMENTARY BACKGROUND FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Article 3.3 activities: Afforestation and Reforestation [1], [2]

Units of land otherwise subject to elected activities under Article 3.4 (information item)

SLOVENIA
Inventory 2010
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GEOGRAPHICAL LOCATION[3]	ACTIVITY DATA	
Identification code	**Subdivision[4]**	**Area subject to the activity (kha)**
Total for activity A.1.3		**NO**
99-national		NO
	land converted to forestland	NO

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

[1] Units of land subject to Afforestation or Reforestation under Article 3.3 otherwise subject to elected activities under Article 3.4 are implicitly included under A.1.1 or A.1.2. They are reported here for transparency and to fulfil the requirement of paragraph 6 (b) (ii) of the annex to decision 15/CMP.1.

[2] As both Afforestation and Reforestation under Article 3.3 are subject to the same provisions specified in the annex to decision 16/CMP.1, they can be reported together.

[3] Geographical location refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation, which would otherwise be included in land subject to elected activities under Article 3.4.

[4] Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

TABLE 5(KP-I)A.2. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Article 3.3 activities: Deforestation [1]

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Inventory 2010
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GEOGRAPHICAL LOCATION[2]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [6]										Implied emission/ removal factor per area[8]	CHANGE IN CARBON STOCK [6]										Net CO_2 emissions/ removals[8]
				Carbon stock change in above-ground biomass per area[4], [5]			Carbon stock change in below-ground biomass per area[4], [5]			Net carbon stock change in litter per area[4]	Net carbon stock change in dead wood per area[4]	Net carbon stock change in soils per area[4]			Carbon stock change in above-ground biomass[4], [5]			Carbon stock change in below-ground biomass[4], [5]			Net carbon stock change in litter[4]	Net carbon stock change in dead wood[4]	Net carbon stock change in soils[4]		
Identification code	Subdivision[3]	Area subject to the activity	Area of organic soils[7]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils [9]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity A.2.		**6.05**	**NO**	**IE**	**-13.05**	**-13.05**	**IE**	**-0.85**	**-0.85**	**-0.67**	**-0.57**	**-0.93**	**NO**	**58.97**	**IE**	**-78.99**	**-78.99**	**IE**	**-5.16**	**-5.16**	**-4.05**	**-3.48**	**-5.64**	**NO**	**356.86**
99-national		6.05	NO	IE	-13.05	-13.05	IE	-0.85	-0.85	-0.67	-0.57	-0.93	NO	58.97	IE	-78.99	-78.99	IE	-5.16	-5.16	-4.05	-3.48	-5.64	NO	356.86
	forest converted to cropland	0.19	NO	IE	-22.20	-22.20	IE	IE	IE	-1.06	-0.91	-6.42	NO	112.15	IE	-4.16	-4.16	IE	IE	IE	-0.20	-0.17	-1.20	NO	21.02
	forest converted to cropland	0.52	NO	IE	-21.92	-21.92	IE	IE	IE	-1.03	-0.89	-10.41	NO	125.58	IE	-11.35	-11.35	IE	IE	IE	-0.53	-0.46	-5.39	NO	65.01
	forest converted to grassland	1.69	NO	IE	-24.46	-24.46	IE	IE	IE	-1.21	-1.04	0.56	NO	95.85	IE	-41.29	-41.29	IE	IE	IE	-2.04	-1.75	0.95	NO	161.82
	forest converted to other land	0.63	NO	IE	-0.83	-0.83	IE	-0.19	-0.19	-0.05	-0.04	NA	NO	4.08	IE	-0.53	-0.53	IE	-0.12	-0.12	-0.03	-0.03	NA	NO	2.58
	forestland converted to	3.03	NO	IE	-7.16	-7.16	IE	-1.67	-1.67	-0.41	-0.35	NA	NO	35.17	IE	-21.66	-21.66	IE	-5.04	-5.04	-1.25	-1.07	NA	NO	106.42

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) Report here information on anthropogenic change in carbon stock for the inventory year for all geographical locations that encompass units of land subject to Deforestation under Article 3.3.

(2) Geographical location refers to the boundaries of the areas that encompass units of land subject to Deforestation.

(3) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(4) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(5) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses"

(6) Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6a of the IPCC good practice guidance for LULUCF).

(7) This information is needed for the calculation of the net carbon stock changes in soils per area.

(8) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

(9) The value reported here is an emission and not a carbon stock change.

TABLE 5(KP-I)A.2.1. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Article 3.3 activities: Deforestation [1]

Units of land otherwise subject to elected activities under Article 3.4 (information item)

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GEOGRAPHICAL LOCATION[2]	ACTIVITY DATA	
Identification code	**Subdivision[3]**	**Area subject to the activity (kha)**
Total for activity A.2.1.		**0.72**
99-national		0.72
	forest converted to cropland annual	0.04
	forest converted to cropland perennial	0.10
	forest converted to grassland	0.36
	forest converted to other land	0.01
	forestland converted to settlements	0.22

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

[1] Units of lands subject to Deforestation under Article 3.3 otherwise subject to elected activities under Article 3.4 are implicitly included under A.2. They are reported here for transparency and to fulfil the requirement of paragraph 6 (b) (ii) of the annex to decision 15/CMP.1.

[2] Geographical location refers to the boundaries of the areas that encompass units of land subject to Deforestation which would otherwise be included in land subject to elected activities under Article 3.4.

[3] Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

TABLE 5(KP-I)B.1. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Elected Article 3.4 activities: Forest Management [1]

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Inventory 2010
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GEOGRAPHICAL LOCATION[2]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [6]											CHANGE IN CARBON STOCK [6]										
				Carbon stock change in above-ground biomass per area [4], [5]			Carbon stock change in below-ground biomass per area [4], [5]			Net carbon stock change in litter per area[4]	Net carbon stock change in dead wood per area[4]	Net carbon stock change in soils per area[4]		Implied emission/ removal factor per area[8]	Carbon stock change in above-ground biomass[4], [5]			Carbon stock change in below-ground biomass[4], [5]			Net carbon stock change in litter[4]	Net carbon stock change in dead wood[4]	Net carbon stock change in soils[4]		Net CO_2 emissions/ removals[8]
Identification code	Subdivision[3]	Area subject to the activity	Area of organic soils[7]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils [9]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity B.1		**1,185.17**	**NO**	**1.84**	**IE**	**1.84**	**0.43**	**IE**	**0.43**	**NA**	**0.11**	**NA**	**NO**	**-8.71**	**2,175.50**	**IE**	**2,175.50**	**511.34**	**IE**	**511.34**	**NA**	**127.02**	**NA**	**NO**	**-10,317.47**
99-national		1,185.17	NO	1.84	IE	1.84	0.43	IE	0.43	NA	0.11	NA	NO	-8.71	2,175.50	IE	2,175.50	511.34	IE	511.34	NA	127.02	NA	NO	-10,317.47
	Forest Land remaining	1,185.17	NO	1.84	IE	1.84	0.43	IE	0.43	NA	0.11	NA	NO	-8.71	2,175.50	IE	2,175.50	511.34	IE	511.34	NA	127.02	NA	NO	-10,317.47

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) If Forest Management has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographical locations that encompass land subject to F

(2) Geographical location refers to the boundaries of the areas that encompass land subject to Forest Management (if elected).

(3) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(4) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(5) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be

(6) Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6a of the IPCC good practice guidance for LULUCF).

(7) This information is needed for the calculation of the net carbon stock changes in soils per area.

(8) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

(9) The value reported here is an emission and not a carbon stock change.

TABLE 5(KP-I)B.2. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Elected Article 3.4 activities: Cropland Management [1], [2]

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GEOGRAPHICAL LOCATION[3]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [7]										Implied emission/ removal factor per area[10]	CHANGE IN CARBON STOCK [7]										Net CO_2 emissions/ removals[10]
				Carbon stock change in above-ground biomass per area [5], [6]			Carbon stock change in below-ground biomass per area [5], [6]			Net carbon stock change in litter per area[5]	Net carbon stock change in dead wood per area[5]	Net carbon stock change in soils per area[5]			Carbon stock change in above-ground biomass[5], [6]			Carbon stock change in below-ground biomass [5], [6]			Net carbon stock change in litter[5]	Net carbon stock change in dead wood[5]	Net carbon stock change in soils[5]		
Identification code	Subdivision[4]	Area subject to the activity	Area of organic soils[9]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils[8]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity B.2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Documentation box
Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

[1] If Cropland Management has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographical locations that encompass land subject to Cropland Management under Article 3.4.

[2] If Cropland Management has been elected, this table and all relevant CRF tables should also be reported for the base year for Cropland Management.

[3] Geographical location refers to the boundaries of the areas that encompass land subject to Cropland Management (if elected).

[4] Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

[5] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative ( ).

[6] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be

[7] Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6b of the IPCC good practice guidance for LULUCF).

[8] The value reported here is an emission and not a carbon stock change.

[9] This information is needed for the calculation of the net carbon stock changes in soils per area.

[10] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

TABLE 5(KP-I)B.3. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL
Elected Article 3.4 activities: Grazing Land Management [1], [2]

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GEOGRAPHICAL LOCATION[3]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS [7]											CHANGE IN CARBON STOCK [7]										
				Carbon stock change in above-ground biomass per area [5], [6]			Carbon stock change in below-ground biomass per area [5], [6]			Net carbon stock change in litter per area[5]	Net carbon stock change in dead wood per area[5]	Net carbon stock change in soils per area[5]		Implied emission/ removal factor per area[10]	Carbon stock change in above-ground biomass[5], [6]			Carbon stock change in below-ground biomass [5], [6]			Net carbon stock change in litter[5]	Net carbon stock change in dead wood[5]	Net carbon stock change in soils[5]		Net CO_2 emissions/ removals[10]
Identification code	Subdivision[4]	Area subject to the activity	Area of organic soils[9]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils[8]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity B.3		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Documentation box
Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) If Grazing Land Management has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographical locations that encompass land subject to Grazing Land Management under Article 3.4.

(2) If Grazing Land Management has been elected, this table and all relevant CRF tables should also be reported for the base year for Grazing Land Management.

(3) Geographical location refers to the boundaries of the areas that encompass land subject to Grazing Land Management (if elected).

(4) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(5) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(6) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in

(7) Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6b of the IPCC good practice guidance for LULUCF).

(8) The value reported here is an emission and not a carbon stock change.

(9) This information is needed for the calculation of the net carbon stock changes in soils per area.

(10) According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO2 removals to be negative (-) and for net CO2 emissions to be positive (+).

TABLE 5(KP-I)B.4. SUPPLEMENTARY BACKGROUND DATA ON CARBON STOCK CHANGES AND NET CO_2 EMISSIONS AND REMOVALS FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Elected Article 3.4 activities: Revegetation [1], [2]

SLOVENIA
Inventory 2010
Submission 2012 v1.1

GEOGRAPHICAL LOCATION[3]	ACTIVITY DATA			IMPLIED CARBON STOCK CHANGE FACTORS[7]										Implied emission/ removal factor per area [10]	CHANGE IN CARBON STOCK[7]										Net CO_2 emissions/ removals[10]
				Carbon stock change in above-ground biomass per area [5], [6]			Carbon stock change in below-ground biomass per area [5], [6]			Net carbon stock change in litter per area[5]	Net carbon stock change in dead wood per area[5]	Net carbon stock change in soils per area[5]			Carbon stock change in above-ground biomass[5], [6]			Carbon stock change in below-ground biomass [5], [6]			Net carbon stock change in litter[5]	Net carbon stock change in dead wood[5]	Net carbon stock change in soils[5]		
Identification code	Subdivision[4]	Area subject to the activity	Area of organic soils [9]	Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils		Gains	Losses	Net change	Gains	Losses	Net change			Mineral soils	Organic soils[8]	
		(kha)	(kha)	(Mg C/ha)										(Mg CO_2/ha)	(Gg C)										(Gg CO_2)
Total for activity B.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

(1) If Revegetation has been elected, report here information on anthropogenic carbon stock change for the inventory year for all geographical locations that encompass land subject to Revegetation under Article 3.4.

(2) If Revegetation has been elected, this table and all relevant CRF tables should also be reported for the base year for Revegetation.

(3) Geographical location refers to the boundaries of the areas that encompass land subject to Revegetation (if elected).

(4) Activity data may be further subdivided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone, national land classification or other criteria. Complete one row for each subdivision.

(5) The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

(6) Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses. In that case, net gains should be reported in the "Gains" column and net losses should be reported in the "Losses"

(7) Note that net change corresponds to increase / decrease of carbon stock (see table 4.2.6b of the IPCC good practice guidance for LULUCF).

(8) The value reported here is an emission and not a carbon stock change.

(9) This information is needed for the calculation of the net carbon stock changes in soils per area.

According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for the CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+).

TABLE 5(KP-II)1. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Direct N_2O emissions from N fertilization [1], [2]

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Identification code of geographical location	ACTIVITY DATA	IMPLIED EMISSION FACTOR	EMISSIONS
	Total amount of fertilizer applied (Gg N/year)	N_2O-N emissions per unit of fertilizer (kg N_2O-N/kg N)[3]	N_2O (Gg)
A.1.1. Afforestation/Reforestation: units of land not harvested since the beginning of the commitment period [4]	**NO**	**NO**	**NO**
99-national	NO	NO	NO
A.1.2. Afforestation/Reforestation: units of land harvested since the beginning of the commitment period [4]	**NO**	**NO**	**NO**
99-national	NO	NO	NO
B.1. Forest Management (if elected) [5]	**NO**	**NO**	**NO**
99-national	NO	NO	NO

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

KP.A.1.1 Direct N2O emissions from N fertilization/2010:Fertilization of forests is not a common practice in Slovenia
KP.A.1.1 99-national/2010:Fertilization of forests is not a common practice in Slovenia
KP.B.1 Direct N2O emissions from N fertilization/2010:Fertilization of forests is not a common practice in Slovenia.

(1) N_2O emissions from fertilization for Cropland Management, Grazing Land Management and Revegetation should be reported in the Agriculture sector. If a Party is not able to separate fertilizer applied to Forest Land from Agriculture, it may report all N_2O emissions from fertilization in the Agriculture sector. This should be explicitly indicated in the documentation box.

(2) Direct N_2O emissions from fertilization are estimated following section 3.2.1.4.1 of the IPCC good practice guidance for LULUCF based on the amount of fertilizer applied to

Direct N_2O emissions from fertilization are estimated following section 5.2.1.4.1 of the IPCC good practice guidance for LULUCF based on the amount of fertilizer applied to land under Forest Management. The indirect N_2O emissions from Afforestation and Reforestation and land under Forest Management are estimated as part of the total indirect emissions in the Agriculture sector based on the total amount of fertilizer used in the country. Parties should show that double counting of N_2O emissions from fertilization with Agriculture sector estimates has been avoided.

(3) In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

(4) Geographical location refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation.

(5) Geographical location refers to the boundaries of the areas that encompass land subject to Forest Management (if elected).

TABLE 5(KP-II)2. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

Elected Article 3.4 activities: Forest Management

N_2O emissions from drainage of soils [1], [2]

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Identification code of geographical location[3]	ACTIVITY DATA Area of drained soils (kha)	IMPLIED EMISSION FACTOR N_2O-N per area drained (kg N_2O-N/ha)[4]	EMISSIONS N_2O (Gg)
B.1. Forest Management (if elected)	**NO**	**NO**	**NO**
Total for organic soils	NO	NO	NO
Total for mineral soils	NO	NO	NO
99-national	NO	NO	NO
Organic soils	NO	NO	NO
Mineral soils	NO	NO	NO

Documentation box
Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.
KP.B.1 N2O emissions from drainage of soils/2010:Drainage of soils in forest is not a common practice in Slovenia.

[1] Methodologies for estimating N_2O emissions from drainage of soils are not addressed in the Revised 1996 IPCC Guidelines, but Appendix 3a.2 of the IPCC good practice guidance for LULUCF provides methodologies for consideration.

[2] N_2O emissions from drainage of soils include those resulting from Forest Management. N_2O emissions from drained Cropland and Grassland soils are covered in the Agriculture sector under Cultivation of Histosols.

[3] Geographical location refers to the boundaries of the areas that encompass land subject to Forest Management (if elected).

[4] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

TABLE 5(KP-II)3. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL

SLOVENIA
Inventory 2010
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N_2O emissions from disturbance associated with land-use conversion to cropland [1], [2]

Identification code of geographical location	ACTIVITY DATA Land area converted (kha)	IMPLIED EMISSION FACTOR N_2O-N per area converted [5] (kg N_2O-N/ha)	EMISSIONS N_2O (Gg)
A.2. Deforestation [3], [6]	0.13	40.36	0.01
Total organic soils	NO	NO	NO
Total mineral soils	0.13	40.36	0.01
99-national	0.13	40.36	0.01
Organic soils [7], [10]	NO	NO	NO
Mineral soils [7]	0.13	40.36	0.01
B.2. Cropland Management (if elected) [4], [8]	NA	NA	NA
Total organic soils	NA	NA	NA
Total mineral soils	NA	NA	NA
Information Items [9]			
A.2.1. Deforestation: units of land otherwise subject	0.13		
Total organic soils	NA		
Total mineral soils	0.13		
99-national	0.13		
Organic soils [7], [10]	NA		
Mineral soils [7]	0.13		

Documentation box
Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR. Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

[1] Methodologies for N_2O emissions from disturbance associated with land-use conversion to Croplands are found in section 3.3.2.3.1.1 of the IPCC good practice guidance for LULUCF. N_2O emissions from fertilization in the preceding land use and new land use should not be reported here. Parties should avoid double counting with N2O emissions from drainage and from cultivation of organic soils reported in the Agriculture sector under Cultivation of Histosols.

[2] According to the IPCC good practice guidance for LULUCF N_2O emissions from disturbance of soils are only relevant for land conversions to Cropland. N_2O emissions from Cropland Management when Cropland is remaining Cropland are included in the Agriculture sector.

[3] Geographical location refers to the boundaries of the areas that encompass units of land subject to Deforestation.

[4] Geographical location refers to the boundaries of the areas that encompass land subject to Cropland Management, if elected.

[5] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[6] N_2O emissions associated with Deforestation followed by the establishment of Cropland should be reported under Deforestation even if Cropland Managemen: is not

[7] Parties may separate data for organic and mineral soils, if they have data available.

[8] This includes N_2O emissions in land subject to Cropland Management from disturbance of soils due to the conversion to Cropland of lands other than Forest Lands.

[9] Units of land subject to Deforestation under Article 3.3 otherwise subject to elected activities under Article 3.4 are implicitly included under A.2. They are reported here for transparency and to fulfil the requirement of paragraph 6 (b) (ii) of the annex to decision 15/CMP.1.

[10] N_2O emissions from Cropland are included in the Agriculture sector.

TABLE 5(KP-II)4. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL
Carbon emissions from lime application [1]

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Identification code of geographical location	ACTIVITY DATA	IMPLIED EMISSION FACTOR	EMISSIONS
	Total amount of lime applied (Mg/year)	Carbon emission per unit of lime (Mg C/Mg)	Carbon (Gg)
A.1.1. Afforestation/Reforestation: units of land not harvested since the beginning of the commitment period [2], [8], [9]	**NO**	**NO**	**NO**
Total for limestone	NO	NO	NO
Total for dolomite	NO	NO	NO
99-national	NO	NO	NO
Limestone ($CaCO_3$)	NO	NO	NO
Dolomite ($CaMg(CO_3)_2$)	NO	NO	NO
A.1.2. Afforestation/Reforestation: units of land harvested since the beginning of the commitment period [2], [8], [9]	**NO**	**NO**	**NO**
Total for limestone	NO	NO	NO
Total for dolomite	NO	NO	NO
99-national	NO	NO	NO
Limestone ($CaCO_3$)	NO	NO	NO
Dolomite ($CaMg(CO_3)_2$)	NO	NO	NO
A.2. Deforestation [3], [8], [9]	**NO**	**NO**	**NO**
Total for limestone	NO	NO	NO
Total for dolomite	NO	NO	NO
99-national	NO	NO	NO
Limestone ($CaCO_3$)	NO	NO	NO
Dolomite ($CaMg(CO_3)_2$)	NO	NO	NO
B.1. Forest Management (if elected) [4], [8], [9]	**NO**	**NO**	**NO**
Total for limestone	NO	NO	NO
Total for dolomite	NO	NO	NO
99-national	NO	NO	NO
Limestone ($CaCO_3$)	NO	NO	NO
Dolomite ($CaMg(CO_3)_2$)	NO	NO	NO
B.2. Cropland Management (if elected) [5], [8], [9]	NA	NA	NA
Total for limestone	NA	NA	NA
Total for dolomite	NA	NA	NA
B.3. Grazing Land Management (if elected) [6], [8], [9]	NA	NA	NA
Total for limestone	NA	NA	NA
Total for dolomite	NA	NA	NA
B.4. Revegetation (if elected) [7], [8], [9]	NA	NA	NA
Total for limestone	NA	NA	NA
Total for dolomite	NA	NA	NA

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the content of this table.

KP.A.1.1 Carbon emissions from lime application/2010:Lime application of forests is not a common practice in Slovenia.
KP.A.1.1 99-national/2010:Lime application of forests is not a common practice in Slovenia.
KP.B.1 Carbon emissions from lime application/2010:Lime application in forests is not a common practice in Slovenia.
KP.B.1 99-national/2010:Lime application in forests is not a common practice in Slovenia.

(1) Carbon emissions from agricultural lime application are addressed in sections 3.3.1.2.1.1 and 3.3.2.2.1.1 of the IPCC good practice guidance for LULUCF.
(2) Geographical location refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation.
(3) Geographical location refers to the boundaries of the areas that encompass units of land subject to Deforestation.
(4) Geographical location refers to the boundaries of the areas that encompass land subject to Forest Management, if elected.
(5) Geographical location refers to the boundaries of the areas that encompass land subject to Cropland Management, if elected.
(6) Geographical location refers to the boundaries of the areas that encompass land subject to Grazing Land Management, if elected.
(7) Geographical location refers to the boundaries of the areas that encompass land subject to Revegetation, if elected.
(8) If Parties are not able to separate lime application for different geographical locations, they should include liming for all geographical locations in the total.
(9) A Party may report aggregate estimates for total lime applications when data are not available for limestone and dolomite.

TABLE 5(KP-II)5. SUPPLEMENTARY BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY ACTIVITIES UNDER THE KYOTO PROTOCOL
GHG emissions from biomass burning

SLOVENIA
Inventory 2010
Submission 2012 v1.1

Identification code of geographical location	ACTIVITY DATA			IMPLIED EMISSION FACTOR			EMISSIONS		
	Description[7]	Unit	Values	CO_2	CH_4	N_2O	CO_2 [8]	CH_4 [8]	N_2O
	Area (AB) or biomass burned (BB)	ha or kg dm		(Mg/activity data unit)			(Gg)		
the beginning of the commitment period[1],[9]	**ab**	**ha**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Total for controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Total for wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
99-national	ab	ha	NO	NO	NO	NO	NO	NO	NO
Controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
A.1.2. Afforestation/Reforestation: units of land harvested since the	**ab**	**ha**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Total for controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Total for wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
99-national	ab	ha	NO	NO	NO	NO	NO	NO	NO
Controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
A.2. Deforestation[2],[9]	**ab**	**ha**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Total for controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Total for wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
99-national	ab	ha	NO	NO	NO	NO	NO	NO	NO
Controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	ab	ha	NO	NO	NO	NO	NO	NO	NO
B.1. Forest Management (if elected) [3],[9]	**ab**	**ha**	**52.06**	**159.57**	**0.91**	**0.01**	**8.31**	**0.05**	**0.00**
Total for controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Total for wildfires	ab	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
99-national	ab	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
Controlled burning	ab	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	ab	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
B.2. Cropland Management (if elected) [4],[9],[10]	**(specify)**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total for controlled burning	(specify)		NA	NA	NA	NA	NA	NA	NA
Total for wildfires	(specify)		NA	NA	NA	NA	NA	NA	NA
B.3. Grazing Land Management (if elected) [5],[9],[11]	**(specify)**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total for controlled burning	(specify)		NA	NA	NA	NA	NA	NA	NA
Total for wildfires	(specify)		NA	NA	NA	NA	NA	NA	NA
B.4. Revegetation (if elected) [6],[9]	**(specify)**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total for controlled burning	(specify)		NA	NA	NA	NA	NA	NA	NA
Total for wildfires	(specify)		NA	NA	NA	NA	NA	NA	NA

Documentation box

Parties should provide detailed explanation on the land use, land-use change and forestry sector in the relevant annex of the NIR: Supplementary information on LULUCF activities under the Kyoto Protocol. Use this documentation box to provide references to relevant sections of the NIR if any additional details are needed to understand the conten: of this table.

KP.A.1.1 Biomass Burning/2010:Controlled burning is not a common practice in Slovenia.
KP.A.1.1 99-national/2010:Controlled burning is not a common practice in Slovenia.
KP.A.2 Biomass Burning/2010:Controlled burning is not a common practice in Slovenia.
KP.A.2 99-national/2010:Controlled burning is not a common practice in Slovenia.

(1) Geographical locations refers to the boundaries of the areas that encompass units of land subject to Afforestation and Reforestation.

(2) Geographical location refers to the boundaries of the areas that encompass units of land subject to Deforestation.

(3) Geographical location refers to the boundaries of the areas that encompass land subject to Forest Management, if elected

(4) Geographical location refers to the boundaries of the areas that encompass land subject to Cropland Management, if elected

(5) Geographical location refers to the boundaries of the areas that encompass land subject to Grazing Land Management, if elected

(6) Geographical location refers to the boundaries of the areas that encompass land subject to Revegetation, if elected

(7) For each activity, activity data should be selected between area burned (AB) or biomass burned (BB). Units will be ha for area burned, and kg dm for biomass burned. The implied emission

(8) If CO_2 emissions from biomass burning are not already included in Tables 5(KP-I)A.1.1 to 5(KP-I)B.4, they should be reported here. This also includes the carbon component of CH_4. This should be clearly documented in the documentation box and in the NIR. Parties that include all carbon stock changes in the carbon stock tables (5(KP-I)A.1.1 to 5(KP-I)B.4) should report IE (included elsewhere) in the CO_2 column.

(9) Parties should report controlled/prescribed burning and wildfires emissions separately, where appropriate.

(10) Burning of agricultural residues is included in the Agriculture sector.

(11) Greenhouse gas emissions from prescribed savannah burning are reported in the Agriculture sector.

INFORMATION TABLE ON ACCOUNTING FOR ACTIVITIES UNDER ARTICLES 3.3 AND 3.4 OF THE KYOTO PROTOCOL

☐Commitment period accounting: YES
☐Annual accounting: NO

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Number of the reported year in the commitment period: 3

GREENHOUSE GAS SOURCE AND SINK ACTIVITIES	BY(5)	Net emissions/removals(1)				Accounting Parameters[7]	Accounting Quantity [8]
		2008	2009	2010	Total[6]		
	(Gg CO_2 equivalent)						
A. Article 3.3 activities							
A.1. Afforestation and Reforestation							NO
A.1.1. Units of land not harvested since the beginning of the commitment period[2]		NO	NO	NO	NO		NO
A.1.2. Units of land harvested since the beginning of the commitment period[2]							NO
99-national		NO	NO	NO	NO		NO
A.2. Deforestation		144.93	316.71	359.43	821.06		821.06
B. Article 3.4 activities							
B.1. Forest Management (if elected)		-10,312.37	-10,305.14	-10,307.99	-30,925.49		-6,600.00
3.3 offset[3]						821.06	0.00
FM cap[4]						6,600.00	-6,600.00
B.2. Cropland Management (if elected)	0.00	NA	NA	NA	NA	0.00	0.00
B.3. Grazing Land Management (if elected)	0.00	NA	NA	NA	NA	0.00	0.00
B.4. Revegetation (if elected)	0.00	NA	NA	NA	NA	0.00	0.00

(1) All values are reported in table 5(KP) of the CRF for the relevant inventory year as reported in the current submission and are automatically entered in this table.

(2) In accordance with paragraph 4 of the annex to decision 16/CMP.1, debits resulting from harvesting during the first commitment period following Afforestation and Reforestation since 1990 shall not be greater than credits accounted for on that unit of land.

(3) In accordance with paragraph 10 of the annex to decision 16/CMP.1, for the first commitment period, a Party included in Annex I that incurs a net source of emissions under the provisions of Article 3.3 may account for anthropogenic greenhouse gas emissions by sources and removals by sinks in areas under Forest Management under Article 3.4, up to a level that is equal to the net source of emissions under the provisions of Article 3.3, but not greater than 9.0 megatonnes of carbon times five, if the total anthropogenic greenhouse gas emissions by sources and removals by sinks in the managed forest since 1990 is equal to, or larger than, the net source of emissions incurred under Article 3.3.

(4) In accordance with paragraph 11 of the annex to decision 16/CMP.1, for the first commitment period only, additions to and subtractions from the assigned amount of a Party resulting from Forest Management under Article 3.4, after the application of paragraph 10 of the annex to decision 16/CMP.1 and resulting from Forest Management project activities undertaken under Article 6, shall not exceed the value inscribed in the appendix of the annex to decision 16/CMP.1, times five.

(5) Net emissions and removals in the Party's base year, as established by decision 9/CP.2.

(6) Cumulative net emissions and removals for all years of the commitment period reported in the current submission.

(7) The values in the cells "3.3 offset" and "FM cap" are absolute values.

(8) The accounting quantity is the total quantity of units to be added to or subtracted from a Party's assigned amount for a particular activitity in accordance with the provisions of Article 7.4 of the Kyoto Protocol.

TABLE 5 SECTORAL REPORT FOR LAND USE, LAND-USE C NGE AND FORESTRY
(Sheet 1 of 1)

Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emissions/removals[1], [2]	CH_4 [2]	N_2O [2]	NO_x	CO	NMVOC
	(Gg)					
Total Land-Use Categories	**-8,575.95**	**0.05**	**0.27**	**0.00**	**0.68**	**0.05**
A. Forest Land	**-11,138.33**	**0.05**	**0.00**	**0.00**	**0.68**	**0.05**
1. Forest Land remaining Forest Land	-10,869.44	0.05	0.00	0.00	0.68	0.05
2. Land converted to Forest Land	-268.89	IE,NO	IE,NO	NE	NE	NE
B. Cropland	**1,612.65**	**NA**	**0.27**	**NA,NE**	**NA,NE**	**NA,NE**
1. Cropland remaining Cropland	411.87	NA	NA	NE	NE	NE
2. Land converted to Cropland	1,200.78	NA	0.27	NA	NA	NA
C. Grassland	**343.04**	**NA,NO**	**NA,NO**	**NA**	**NA**	**NA**
1. Grassland remaining Grassland	IE,NA,NO	NO	NO	NA	NA	NA
2. Land converted to Grassland	343.04	NA,NO	NA,NO	NA	NA	NA
D. Wetlands	**NE,NO**	**NE,NO**	**NE,NO**	**NE**	**NE**	**NE**
1. Wetlands remaining Wetlands [3]	NE,NO	NO	NO	NE	NE	NE
2. Land converted to Wetlands	NO	NE,NO	NE,NO	NE	NE	NE
E. Settlements	**606.69**	**NE,NO**	**NE,NO**	**NE**	**NE**	**NE**
1. Settlements remaining Settlements [3]	NA	NE	NE	NE	NE	NE
2. Land converted to Settlements	606.69	NE	NE	NE	NE	NE
F. Other Land	**NA,NO**	**NO**	**NO**	**NE**	**NE**	**NE**
1. Other Land remaining Other Land [4]						
2. Land converted to Other Land	NA,NO	NO	NO	NE	NE	NE
G. Other *(please specify)* [5]	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
Harvested Wood Products [6]	NE	NE	NE	NE	NE	NE
Information items[7]						
Forest Land converted to other Land-Use Categories	NA	NA	NA	NA	NA	NA
Grassland converted to other Land-Use Categories	NA	NA	NA	NA	NA	NA

[1] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[2] For each land-use category and sub-category, this table sums net CO_2 emissions and removals shown in tables 5.A to 5.F, and the CO_2, CH_4 and N_2O emissions showing in tables 5(I) to 5(V).

[3] Parties may decide not to prepare estimates for these categories contained in appendices 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[4] This land-use category is to allow the total of identified land area to match the national area.

[5] The total for category 5.G Other includes items specified only under category 5.G in this table as well as sources and sinks specified in category 5.G in tables 5(I) to 5(V).

[6] Parties may decide not to prepare estimates for this category contained in appendix 3a.1 of the IPCC good practice guidance for LULUCF, although they may do so if they wish and report in this row.

[7] These items are listed for information only and will not be added to the totals, because they are already included in subcategories 5.A.2 to 5.F.2.

Documentation box:

• Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• If estimates are reported under 5.G Other, use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

TABLE 5.A SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Forest Land
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS						CHANGES IN CARBON STOCK						
Land-Use Category	Sub-division[1]	Area[2] (kha)	Area of organic soil[2] (kha)	Carbon stock change in living biomass per area[3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area[4]		Carbon stock change in living biomass[3] [4]			Net carbon stock change in dead organic matter[4]	Net carbon stock change in soils [4] [6]		Net CO_2 emissions/ removals[8] [9]
				Gains	Losses	Net change		Mineral soils[5]	Organic soils	Gains	Losses	Net change		Mineral soils	Organic soils[7]	
				(Mg C/ha)						(Gg C)						(Gg)
A. Total Forest Land		1,244.27	NA,NO	2.30	NA	2.30	0.11	0.04	NA,NO	2,860.34	NA	2,860.34	131.95	47.71	NA,NO	-11,146.64
1. Forest Land remaining Forest Land		1,239.42	NA	2.29	NA	2.29	0.11	NA	NA	2,834.71	NA	2,834.71	131.95	NA	NA	-10,877.75
2. Land converted to Forest Land[10]		4.84	NA,NO	5.29	NA	5.29	NA	9.85	NA,NO	25.63	NA	25.63	NA	47.71	NA,NO	-268.89
2.1 Cropland converted to Forest Land		1.11	NA	5.63	NA	5.63	NA	50.37	NA	6.23	NA	6.23	NA	55.72	NA	-227.15
2.2 Grassland converted to Forest Land		3.08	NO	5.63	NA	5.63	NA	-2.60	NO	17.36	NA	17.36	NA	-8.01	NO	-34.27
2.3 Wetlands converted to Forest Land		0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.4 Settlements converted to Forest Land		0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.5 Other Land converted to Forest Land		0.36	NA	5.63	NA	5.63	NA	NA	NA	2.04	NA	2.04	NA	NA	NA	-7.47

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Forest Land report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.

[6] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils.

[7] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.

[8] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[9] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[10] A Party may report aggregate estimates for all conversions of land to forest land when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.B SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHAN ND FORESTRY

Cropland
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS						CHANGES IN CARBON STOCK						
Land-Use Category	Sub-division [1]	Area[2] (kha)	Area of organic soil[2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area [4]		Carbon stock change in living biomass[3], [4], [6]			Net carbon stock change in dead organic matter[4] [7]	Net carbon stock change in soils [4] [8]		Net CO_2 emissions/ removals [10] [11]
				Gains	Losses	Net change		Mineral soils[5]	Organic soils	Gains	Losses	Net change		Mineral soils	Organic soils[9]	
				(Mg C/ha)						(Gg C)						(Gg)
B. Total Cropland		233.22	6.88	IE,NA,NO	-0.56	-0.56	-0.04	-0.97	-10.00	IE,NA,NO	-131.10	-131.10	-8.47	-219.40	-68.84	1,568.65
1. Cropland remaining Cropland		228.18	6.88	IE	-0.12	-0.12	NA	-0.02	-10.00	IE	-26.97	-26.97	NA	-4.52	-68.84	367.87
2. Land converted to Cropland[12]		5.04	NA,NO	NA,NO	-20.67	-20.67	-1.68	-42.66	NA,NO	NA,NO	-104.13	-104.13	-8.47	-214.89	NA,NO	1,200.78
2.1 Forest Land converted to Cropland		0.84	NA	NA	-110.77	-110.77	-10.09	-54.16	NA	NA	-93.01	-93.01	-8.47	-45.47	NA	538.83
2.2 Grassland converted to Cropland		3.62	NA	NA	-3.07	-3.07	NA	-46.82	NA	NA	-11.12	-11.12	NA	-169.41	NA	661.95
2.3 Wetlands converted to Cropland		0.05	NO	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.4 Settlements converted to Cropland		0.47	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.5 Other Land converted to Cropland		0.06	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Cropland report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.

[6] For category 5.B.1 Cropland remaining Cropland this column only includes changes in perennial woody biomass.

[7] No reporting on dead organic matter pools is required for category 5.B.1. Cropland remaining Cropland.

[8] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils.

[9] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.

[10] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[11] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[12] A Party may report aggregate estimates for all land conversions to cropland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.C SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Grassland

(Sheet 1 of 1)

Inventory 2010

Submission 2012 v1.1

SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS						CHANGES IN CARBON STOCK						Net CO_2 emissions/ removals [10] [11]
Land-Use Category	Sub-division [1]	Area [2] (kha)	Area of organic soil [2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area [4]	Net carbon stock change in soils per area [4]		Carbon stock change in living biomass [3], [4], [6]			Net carbon stock change in dead organic matter [4] [7]	Net carbon stock change in soils [4] [8]		
				Gains	Losses	Net change		Mineral soils [5]	Organic soils	Gains	Losses	Net change		Mineral soils	Organic soils [9]	
				(Mg C/ha)						(Gg C)						(Gg)
C. Total Grassland		407.82	IE,NA	IE,NA	-0.79	-0.79	-0.05	0.61	NA	IE,NA	-320.46	-320.46	-19.99	246.89	NA	343.04
1. Grassland remaining Grassland		397.99	IE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2. Land converted to Grassland [12]		9.83	NA	IE,NA	-32.62	-32.62	-2.03	25.13	NA	IE,NA	-320.46	-320.46	-19.99	246.89	NA	343.04
2.1 Forest Land converted to Grassland		1.98	NA	NA	-112.32	-112.32	-10.09	2.60	NA	NA	-222.56	-222.56	-19.99	5.15	NA	870.46
2.2 Cropland converted to Grassland		5.83	NA	IE	-16.79	-16.79	NA	41.46	NA	IE	-97.89	-97.89	NA	241.73	NA	-527.42
2.3 Wetlands converted to Grassland		0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.4 Settlements converted to Grassland		1.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.5 Other Land converted to Grassland		0.65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Grassland report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.

[6] For category 5.C.1 Grassland remaining Grassland this column only includes changes in perennial woody biomass.

[7] No reporting on dead organic matter pools is required for category 5.C.1 Grassland remaining Grassland.

[8] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils

[9] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.

[10] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[11] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[12] A Party may report aggregate estimates for all land conversions to grassland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.D SECTORAL BACKGROUND DATA FOR LAND USE, LAN `E CHANGE AND FORESTRY

Wetlands

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					
Land-Use Category	Sub-division [1]	Area [2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area [4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass [3] [4]			Net carbon stock change in dead organic matter [4]	Net carbon stock change in soils [4]	Net CO_2 emissions/ removals [5] [6]
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
D. Total Wetlands		13.44	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
1. Wetlands remaining Wetlands [7]		13.12	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
2. Land converted to Wetlands [8]		0.32	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.1 Forest Land converted to Wetlands		0.08	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.2 Cropland converted to Wetlands		0.08	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.3 Grassland converted to Wetlands		0.11	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.4 Settlements converted to Wetlands		0.03	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.5 Other Land converted to Wetlands		0.01	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Wetlands report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[6] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[7] Parties may decide not to prepare estimates for this category contained in appendix 3a.3 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[8] A Party may report aggregate estimates for all land conversions to wetlands, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.E SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Settlements
(Sheet 1 of 1)

Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					
Land-Use Category	Sub-division [1]	Area[2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass[3], [4], [5]			Net carbon stock change in dead organic matter[4]	Net carbon stock change in soils [4]	Net CO_2 emissions/ removals [6] [7]
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
E. Total Settlements		112.84	NA,NO	-1.38	-1.38	-0.09	NA,NO	NA,NO	-155.54	-155.54	-9.92	NA,NO	606.69
1. Settlements remaining Settlements [8]		109.66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2. Land converted to Settlements [9]		3.17	NA,NO	-49.00	-49.00	-3.13	NA,NO	NA,NO	-155.54	-155.54	-9.92	NA,NO	606.69
2.1 Forest Land converted to Settlements		0.98	NA	-113.17	-113.17	-10.09	NA	NA	-111.33	-111.33	-9.92	NA	444.58
2.2 Cropland converted to Settlements		0.96	NA	-37.91	-37.91	NA	NA	NA	-36.48	-36.48	NA	NA	133.75
2.3 Grassland converted to Settlements		1.15	NA	-6.75	-6.75	NA	NA	NA	-7.74	-7.74	NA	NA	28.36
2.4 Wetlands converted to Settlements		0.07	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.5 Other Land converted to Settlements		0.01	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Settlements report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] For category 5.E.1 Settlements remaining Settlements this column only includes changes in perennial woody biomass.

[6] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[7] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[8] Parties may decide not to prepare estimates for this category contained in appendix 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[9] A Party may report aggregate estimates for all land conversions to settlements, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5.F SECTORAL BACKGROUND DATA FOR LAND USE, LAND[illegible]E CHANGE AND FORESTRY

Other land
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					
Land-Use Category	Sub-division [1]	Area[2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass[3] [4]			Net carbon stock change in dead organic matter[4]	Net carbon stock change in soils [4]	Net CO_2 emissions/ removals [5] [6]
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
F. Total Other Land		26.24	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
1. Other Land remaining Other Land [7]		26.02											
2. Land converted to Other Land [8]		0.22	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
2.1 Forest Land converted to Other Land		0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.2 Cropland converted to Other Land		0.00	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.3 Grassland converted to Other Land		0.01	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.4 Wetlands converted to Other Land		0.01	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2.5 Settlements converted to Other Land		0.00	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Other Land report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[6] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[7] This land-use category is to allow the total of identified land area to match the national area.

[8] A Party may report aggregate estimates for all land conversions to other land, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (I) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Direct N_2O emissions from N fertilization[1] of Forest Land and Other

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS[4]
Land-Use Category[2]	Total amount of fertilizer applied	N_2O-N emissions per unit of fertilizer	N_2O
	(Gg N/yr)	(kg N_2O-N/kg N)[3]	(Gg)
Total for all Land Use Categories	**NO**	**NA,NO**	**NA,NO**
A. Forest Land[5][6]	**NO**	**NO**	**NO**
1. Forest Land remaining Forest Land	NO	NO	NO
2. Land converted to Forest Land	NO	NO	NO
G. Other ***(please specify)***			**NA**

[1] Direct N_2O emissions from fertilization are estimated using equations 3.2.17 and 3.2.18 of the IPCC good practice guidance for LULUCF based on the amounts of fertilizers applied to forest land.

[2] N_2O emissions from N fertilization of cropland and grassland are reported in the Agriculture sector; therefore only Forest Land is included in this table.

[3] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[4] Emissions are reported with a positive sign.

[5] If a Party is not able to separate the fertilizer applied to forest land from that applied to agriculture, it may report all N_2O emissions from fertilization in the Agriculture sector. This should be explicitly indicated in the documentation box.

[6] A Party may report aggregate estimates for all N fertilization on forest land in the category Forest Land remaining Forest Land when data are not available to report Forest Land remaining Forest Land and Land converted to Forest Land separately.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (II) SECTORAL BACKGROUND DATA FOR LAN SE, LAND-USE CHANGE AND FORESTRY

Non-CO_2 emissions from drainage of soils and wetlands[1]
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS		EMISSIONS[5]	
Land-Use Category[2]	Sub-division[3]	Area (kha)	N_2O-N per area[4] (kg N_2O-N/ha)	CH_4 per area (kg CH_4/ha)	N_2O (Gg)	CH_4 (Gg)
Total all Land-Use Categories					**NA,NE,NO**	**NA,NE,NO**
A. Forest Land[6]			**NO**	**NO**	**NO**	**NO**
Organic Soil		NO	NO	NO	NO	NO
Mineral Soil		NO	NO	NO	NO	NO
D. Wetlands			**NE,NO**	**NE,NO**	**NE,NO**	**NE,NO**
Peatland[7]		NE	NE	NE	NE	NE
Flooded Lands[7]		NO	NO	NO	NO	NO
G. Other (please specify)					**NA**	**NA**

[1] Parties may decide not to prepare estimates for these categories contained in appendices 3a.2 and 3a.3 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[2] N_2O emissions from drained cropland and grassland soils are covered in the Agriculture tables of the CRF under Cultivation of Histosols.

[3] A Party should report further disaggregations of drained soils corresponding to the methods used. Tier 1 disaggregates soils into "nutrient rich" and "nutrient poor" areas, whereas higher-tier methods can further disaggregate into different peatland types, soil t

[4] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[5] Emissions are reported with a positive sign.

[6] In table 5, these emissions will be added to 5.A.1 Forest Land remaining Forest Land.

[7] In table 5, these emissions will be added to 5.D.2 Land converted to Wetlands.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (III) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

N_2O emissions from disturbance associated with land-use conversion to cropland [1]

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS [4]
Land-Use Category [2]	Land area converted	N_2O-N emissions per area converted [3]	N_2O
	(kha)	(kg N_2O-N/ha)	(Gg)
Total all Land-Use Categories [5]	**4.57**	**37.71**	**0.27**
B. Cropland	**4.57**	**37.71**	**0.27**
2. Lands converted to Cropland [6]	4.57	37.71	0.27
Organic Soils	NA,NO	NA,NO	NA,NO
Mineral Soils	4.57	37.71	0.27
2.1 Forest Land converted to Cropland	0.84	43.40	0.06
Organic Soils	NO	NO	NO
Mineral Soils	0.84	43.40	0.06
2.2 Grassland converted to Cropland	3.62	37.52	0.21
Organic Soils	NO	NO	NO
Mineral Soils	3.62	37.52	0.21
2.3 Wetlands converted to Cropland [7]	0.05	NA	NA
Organic Soils	NA	NA	NA
Mineral Soils	0.05	NA	NA
2.5 Other Land converted to Cropland	0.06	NA	NA
Organic Soils	NA	NA	NA
Mineral Soils	0.06	NA	NA
G. Other *(please specify)*			

[1] Methodologies for N_2O emissions from disturbance associated with land-use conversion are based on equations 3.3.14 and 3.3.15 of the IPCC good practice guidance for LULUCF. N_2O emissions from fertilization in the preceding land use and new land use should not be reported.

[2] According to the IPCC good practice guidance for LULUCF, N_2O emissions from disturbance of soils are only relevant for land conversions to cropland. N_2O emissions from Cropland remaining Cropland are included in the Agriculture sector of the good practice guidance. The good practice guidance provides methodologies only for mineral soils.

[3] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[4] Emissions are reported with a positive sign.

[5] Parties can separate between organic and mineral soils, if they have data available.

[6] If activity data cannot be disaggregated to all initial land uses, Parties may report some initial land uses aggregated under Other Land converted to Cropland (indicate in the documentation box what this category includes).

[7] Parties should avoid double counting with N_2O emissions from drainage and from cultivation of organic soils reported in Agriculture under Cultivation of Histosols.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF Sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (IV) SECTORAL BACKGROUND DATA F LAND USE, LAND-USE CHANGE AND F ESTRY

CO_2 emissions from agricultural lime application [1]

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS [3]
Land-Use Category	Total amount of lime applied (Mg/yr)	CO_2-C per unit of lime [2] (Mg CO_2-C /Mg)	CO_2 (Gg)
Total all Land-Use Categories [4], [5], [6]	**100,000.00**	**0.12**	**44.00**
B. Cropland [6] [7]	**100,000.00**	**0.12**	**44.00**
Limestone $CaCO_3$	100,000.00	0.12	44.00
Dolomite $CaMg(CO_3)_2$	IE	IE	IE
C. Grassland [6] [8]	**IE**	**IE**	**IE**
Limestone $CaCO_3$	IE	IE	IE
Dolomite $CaMg(CO_3)_2$	IE	IE	IE
G. Other *(please specify)* [6] [9]			**NA**

[1] CO_2 emissions from agricultural lime application are addressed in equations 3.3.6 and 3.4.11 of the IPCC good practice guidance for LULUCF.

[2] The implied emission factor is expressed in unit of carbon to faciliate comparison with published emission factors.

[3] Emissions are reported with a positive sign.

[4] If Parties are not able to separate liming application for different land-use categories, they should include liming for all land-use categories in the category 5.G Other.

[5] Parties that are able to provide data for lime application to forest land should provide this information under 5.G Other and specify in the documentation box that forest land application is included in this category.

[6] A Party may report aggregate estimates for total lime applications when data are not available for limestone and dolomite.

[7] In table 5, these CO_2 emissions will be added to 5.B.1 Cropland remaining Cropland.

[8] In table 5, these CO_2 emissions will be added to 5.C.1 Grassland remaining Grassland.

[9] If a Party has data broken down to limestone and dolomite at national level, it can report these data under 5.G Other.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (V) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Biomass Burning [1]

(Sheet 1 of 1)

Inventory 2010

Submission 2012 v1.1

SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTOR			EMISSIONS [5]		
	Description [3]	Unit	Values	CO_2	CH_4	N_2O	CO_2 [4]	CH_4	N_2O
Land-Use Category [2]		(ha or kg dm)		(Mg/activity data unit)			(Gg)		
Total for Land-Use Categories	**Area burned**	**ha**	**52.06**	**159.57**	**0.91**	**0.01**	**8.31**	**0.05**	**0.00**
A. Forest Land	**Area burned**	**ha**	**52.06**	**159.57**	**0.91**	**0.01**	**8.31**	**0.05**	**0.00**
1. Forest land remaining Forest Land	Area burned	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
Controlled Burning	Area burned	ha	NO	NO	NO	NO	NO	NO	NO
Wildfires	Area burned	ha	52.06	159.57	0.91	0.01	8.31	0.05	0.00
2. Land converted to Forest Land	Area burned	ha	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO	IE,NO
Controlled Burning	(specify)		NO	NO	NO	NO	NO	NO	NO
Wildfires	Area burned	ha	IE	IE	IE	IE	IE	IE	IE
B. Cropland	**Area burned**		**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
1. Cropland remaining Cropland [6]			NA	NA	NA	NA	NA	NA	NA
Controlled Burning	(specify)		NA	NA	NA	NA	NA	NA	NA
Wildfires	(specify)		NA	NA	NA	NA	NA	NA	NA
2. Land converted to Cropland	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
Controlled Burning	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
Wildfires	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
2.1. Forest Land converted to Cropland	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
Controlled Burning	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
Wildfires	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
C. Grassland	**Area burned**	**ha**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**
1. Grassland remaining grassland [7]			NO	NO	NO	NO	NO	NO	NO
Controlled Burning	(specify)		NO	NO	NO	NO	NO	NO	NO
Wildfires	(specify)		NO	NO	NO	NO	NO	NO	NO
2. Land converted to Grassland	Area burned	ha	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Controlled Burning			NO	NO	NO	NO	NO	NO	NO
Wildfires	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
2.1. Forest Land converted to Grassland	Area burned	ha	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Controlled Burning	(specify)		NO	NO	NO	NO	NO	NO	NO
Wildfires	Area burned	ha	NA	NA	NA	NA	NA	NA	NA
D. Wetlands			**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
1. Wetlands remaining Wetlands [8]			NO	NO	NO	NO	NO	NO	NO
Controlled Burning	(specify)		NO	NO	NO	NO	NO	NO	NO
Wildfires	(specify)		NO	NO	NO	NO	NO	NO	NO
2. Land converted to Wetlands			NO	NO	NO	NO	NO	NO	NO
Controlled Burning			NO	NO	NO	NO	NO	NO	NO
Wildfires			NO	NO	NO	NO	NO	NO	NO
2.1. Forest Land converted to Wetlands			NO	NO	NO	NO	NO	NO	NO
Controlled Burning	(specify)		NO	NO	NO	NO	NO	NO	NO
Wildfires	(specify)		NO	NO	NO	NO	NO	NO	NO
E. Settlements [9]	(specify)		NE	**NO**	**NO**	**NO**	NO	NO	NO
F. Other Land [9]	(specify)		NE	**NO**	**NO**	**NO**	NO	NO	NO
G. Other (please specify)									

[1] Methodological guidance on burning can be found in sections 3.2.1.4 and 3.4.1.3 of the IPCC good practice guidance for LULUCF.

[2] Parties should report both controlled/prescribed burning and wildfires emissions, where appropriate, in a separate manner.

[3] For each category activity data should be selected between area burned or biomass burned. Units for area will be ha and for biomass burned kg dm. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[4] If CO_2 emissions from biomass burning are not already included in tables 5.A - 5.F, they should be reported here. This should be clearly documented in the documentation box and in the NIR. Double counting should be avoided. Parties that include all carbon stock changes in the carbon stock tables (5.A, 5.B, 5.C, 5.D, 5.E and 5.F), should report IE (included elsewhere) in this column.

[5] Emissions are reported with a positive sign.

[6] In-situ above-ground woody biomass burning is reported here. Agricultural residue burning is reported in the Agriculture sector.

[7] Includes only emissions from controlled biomass burning on grasslands outside the tropics (prescribed burning is reported under the Agriculture sector).

[8] Parties may decide not to prepare estimates for these categories contained in appendices 3a.2, 3a.3 and ·f the IPCC good practice guidance for LULUCF, although they may do so if they

[9] This land-use category is to allow the total of identified land area to match the national area.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 6 SECTORAL REPORT FOR WASTE
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 [1]	CH_4	N_2O	NO_x	CO	NMVOC	SO_2
	(Gg)						
Total Waste	**5.23**	**24.43**	**0.19**	**NA,NE,NO**	**NA,NE,NO**	**NA,NE,NO**	**NA,NE**
A. Solid Waste Disposal on Land	**NA,NO**	**16.95**		**NA,NE,NO**	**NA,NE,NO**	**NA,NE,NO**	
1. Managed Waste Disposal on Land	NA	16.95		NE	NE	NE	
2. Unmanaged Waste Disposal Sites	NO	NO		NO	NO	NO	
3. Other *(as specified in table 6.A)*	NA	NA		NA	NA	NA	
B. Waste Water Handling		**7.48**	**0.19**	**NA,NE**	**NA,NE**	**NA,NE**	
1. Industrial Wastewater		0.64	NA	NE	NE	NE	
2. Domestic and Commercial Waste Water		6.84	0.19	NE	NE	NE	
3. Other *(as specified in table 6.B)*		NA	NA	NA	NA	NA	
C. Waste Incineration	**5.23**	**NA,NO**	**0.00**	**NE**	**NE**	**NE**	**NE**
D. Other *(please specify)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

[1] CO_2 emissions from source categories Solid waste disposal on land and Waste incineration should only be included if they derive from non-biological or inorganic waste sources.

Documentation box:

• Parties should provide detailed explanations on the waste sector in Chapter 8: Waste (CRF sector 6) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• If estimates are reported under "6.D Other", use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

TABLE 6.A SECTORAL BACKGROUND DATA FOR WASTE
Solid Waste Disposal
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR		EMISSIONS		
	Annual MSW at the SWDS	MCF	DOC degraded	CH_4 [1]	CO_2	CH_4		CO_2 [4]
						Emissions [2]	Recovery [3]	
	(Gg)		%	(t /t MSW)		(Gg)		
1 Managed Waste Disposal on Land	623.22	1.00	8.50	0.04	NA	16.95	9.82	NA
2 Unmanaged Waste Disposal Sites	NO	NO	NO	NO	NO	NO	NO	NO
a. Deep (>5 m)	NO	NO	NO	NO	NO	NO	NO	NO
b. Shallow (<5 m)	NO	NO	NO	NO	NO	NO	NO	NO
3 Other *(please specify)*						NA	NA	NA

Note: MSW - Municipal Solid Waste, SWDS - Solid Waste Disposal Site, MCF - Methane Correction Factor, DOC - Degradable Organic Carbon (IPCC Guidelines (Volume 3. Reference Manual, section 6.2.4)).
MSW includes household waste, yard/garden waste, commercial/market waste and organic industrial solid waste. MSW should not include inorganic industrial waste such as construction or demolition materials.

[1] The CH_4 implied emission factor (IEF) is calculated on the basis of gross CH_4 emissions, as follows: IEF = (CH_4 emissions + CH_4 recovered)/annual MSW at the SWDS.
[2] Actual emissions (after recovery).
[3] CH_4 recovered and flared or utilized.
[4] Under Solid Waste Disposal, CO_2 emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. CO_2 emissions from non-biogenic wastes are included in the total emissions, whereas the CO_2 emissions from biogenic wastes are not included in the total emissions.

Additional information

Description	Value
Total population (1000s)[a]	2,049.26
Urban population (1000s)[a]	1,905.81
Waste generation rate (kg/capita/day)	1.07
Fraction of MSW disposed to SWDS	0.78
Fraction of DOC in MSW	0.30
CH_4 oxidation factor [b]	0.10
CH_4 fraction in landfill gas	0.50
CH_4 generation rate constant (k) [c]	0.05
Time lag considered (yr) [c]	46.00

[a] Specify whether total or urban population is used and the rationale for doing so.
[b] See IPCC Guidelines (Volume 3. Reference Manual, p. 6.9).
[c] Only for Parties using Tier 2 methods.

TABLE 6.C SECTORAL BACKGROUND DATA FOR WASTE
Waste Incineration
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTOR			EMISSIONS		
	Amount of incinerated wastes	CO_2	CH_4	N_2O	CO_2 [1]	CH_4	N_2O
	(Gg)	(kg/t waste)			(Gg)		
Waste Incineration	3.56				5.23	NA,NO	0.00
a. Biogenic [1]	0.03	1,288.80	NA	0.40	0.04	NA	0.00
b. Other (non-biogenic - *please specify*) [1],[2]	3.53				5.23	NA,NO	0.00
Clinical waste	0.67	836.00	NO	NO	0.56	NO	NO
Hazardous Waste	2.84	1,641.75	NA	NA	4.66	NA	NA
Municipal waste burning	0.02	557.33	NA	0.15	0.01	NA	0.00

[1] Under Solid Waste Disposal, CO_2 emissions should be reported only when the disposed waste is combusted at the disposal site as a management practice. CO_2 emissions from non-biogenic wastes are included in the total emissions, while the CO_2 emissions from biogenic wastes are not included in the total emissions.
[2] Enter under this source category all types of non-biogenic wastes, such as plastics.

Note: Only emissions from waste incineration without energy recovery are to be reported in the Waste sector. Emissions from incineration with energy recovery are to be reported in the Energy sector, as Other Fuels (see IPCC good practice guidance, page 5.23).

Documentation box:
- Parties should provide detailed explanations on the waste sector in Chapter 8: Waste (CRF sector 6) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details
- Parties that use country-specific models should provide a reference in the documentation box to the relevant section in the NIR where these models are described, and fill in only the relevant cells of tables 6.A and 6.C.
- Provide a reference to the relevant section in the NIR, in particular with regard to:
  (a) A population size (total or urban population) used in the calculations and the rationale for doing so;
  (b) The composition of landfilled waste;
  (c) In relation to the amount of incinerated wastes (specify whether the reported data relate to wet or dry matter).

TABLE 6.B SECTORAL BACKGROUND DATA FOR WASTE
Waste Water Handling
(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND RELATED INFORMATION[1]	IMPLIED EMISSION FACTOR		EMISSIONS		
	Total organic product	CH_4[2]	N_2O[3]	CH_4 Emissions[4]	CH_4 Recovery[5]	N_2O[3]
	(Gg DC[1]/yr)	(kg/kg DC)		(Gg)		
1. Industrial Waste Water				0.64	NE,NO	NA
a. Waste Water	3.10	0.01	NE	0.02	NE	NA
b. Sludge	33.02	0.02	NE	0.62	NO	NA
2. Domestic and Commercial Wastewater				6.84	2.32	0.19
a. Waste Water	26.12	0.02	NE	0.40	IE	NA
b. Sludge	17.41	0.50	NE	6.45	2.32	NA
3. Other *(please specify)*[6]				NA	NA	NA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR	EMISSIONS
	Population (1000s)	Protein consumption (kg/person/yr)	N fraction (kg N/kg protein)	N_2O (kg N_2O-N/kg sewage N produced)	N_2O (Gg)
N_2O from human sewage[3]	2,050.19	36.99	0.16	0.01	0.19

[1] DC - degradable organic component. DC indicators are COD (Chemical Oxygen Demand) for industrial waste water and BOD (Biochemical Oxygen Demand) for Domestic/Commercial waste water/sludge (IPCC Guidelines (Volume 3. Reference Manual, pp. 6.14, 6.18)).

[2] The CH_4 implied emission factor (IEF) is calculated on the basis of gross CH_4 emissions, as follows: IEF = (CH_4 emissions + CH_4 recovered or flared) / total organic product.

[3] Parties using methods other than those from the IPCC for estimating N_2O emissions from human sewage or waste-water treatment should provide aggregate data in this table.

[4] Actual emissions (after recovery).

[5] CH_4 recovered and flared or utilized.

[6] Use the cells below to specify each activity covered under "6.B.3 Other". Note that under each reported activity, data for waste water and sludge are to be reported separately.

Documentation box:

- Parties should provide detailed explanations on the Waste sector in Chapter 8: Waste (CRF sector 6) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
- Regarding the estimates for N_2O from human sewage, specify whether total or urban population is used in the calculations and the rationale for doing so. Provide explanation in the documentation box.
- Parties using methods other than those from the IPCC for estimating N_2O emissions from human sewage or waste-water treatment should provide, in the NIR, corresponding information on methods, activity data and emission factors used, and should provide a reference to the relevant section of the NIR in this documentation box.

TABLE 6.B SECTORAL BACKGROUND DATA FOR WASTE

Inventory 2010

Waste Water Handling

Submission 2012 v1.1

(Sheet 2 of 2)

SLOVENIA

Additional information

	Domestic	Industrial
Total waste water (m^3):	NE	NE
Treated waste water (%):	NE	NE

Waste-water streams:	Waste-water output (m^3)	DC (kg COD/m^3)
Industrial waste water	NE	NE
Iron and steel	NE	NE
Non-ferrous	NE	NE
Fertilizers	NE	NE
Food and beverage	4,038,928.00	3.25
Paper and pulp	13,596,494.00	2.40
Organic chemicals	1,633,612.00	2.00
Other (please specify)	NE	NE
Chemical		
[illegible]y Processing		
Electricity, steam, water production		
Fuels		
Iron and steel		
Leather and Skins		
Leather industry	9,224.00	3.00
Machinery and equipment		
Meat industry		
Mining and quarrying		
Other agricultural		
Poultry		
Rubber		
Textile		
Wood and wood production		
Wool Scouring		
	DC (kg BOD/1000 person/yr)	
Domestic and Commercial	NE	
Other (please specify)		

Handling systems:	Industrial waste water treated (%)	Industrial sludge treated (%)	Domestic waste water treated (%)	Domestic sludge treated (%)
Aerobic	95.00	20.00	98.73	17.70
Anaerobic	5.00	80.00	1.27	NE
Other (please specify)	NE	NO	NE	82.30

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emissions/removals	CH_4	N_2O	$HFCs^{(1)}$		$PFCs^{(1)}$		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)						(Gg)			
Total National Emissions and Removals	**7,527.40**	**96.99**	**3.94**	**176.46**	**168.79**	**NA,NO**	**13.68**	**0.00**	**0.00**	**44.67**	**155.92**	**33.66**	**10.37**
1. Energy	**15,369.68**	**20.13**	**0.58**							**44.62**	**155.24**	**20.63**	**9.64**
A. Fuel Combustion — Reference Approach [2]	15,240.23												
A. Fuel Combustion — Sectoral Approach [2]	15,289.05	6.87	0.58							44.62	155.24	18.19	9.64
1. Energy Industries	6,181.20	0.11	0.09							11.01	1.71	0.12	6.25
2. Manufacturing Industries and Construction	1,874.46	0.27	0.06							3.81	9.03	0.94	2.44
3. Transport	5,182.01	0.44	0.26							24.16	40.18	4.98	0.05
4. Other Sectors	2,048.52	6.06	0.17							5.65	104.31	12.16	0.90
5. Other	2.87	0.00	0.00							IE,NA	IE,NA	IE,NA	IE,NA
B. Fugitive Emissions from Fuels	80.63	13.26	NA,NO							NA,NE,NO	NA,NE,NO	2.44	NA,NE,NO
1. Solid Fuels	80.63	11.87	NA,NO							NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NO
2. Oil and Natural Gas	0.00	1.39	NO							NA,NO	NA,NO	2.44	NA,NE,NO
2. Industrial Processes	**728.44**	**0.16**	**NA,NO**	**176.46**	**168.79**	**NA,NO**	**13.68**	**0.00**	**0.00**	**0.04**	**IE,NA,NE,NO**	**1.00**	**0.73**
A. Mineral Products	618.26	NA	NA							IE,NA,NE	IE,NA,NE	0.44	0.28
B. Chemical Industry	1.14	0.16	NA,NO	NA	NA	NA	NA	NA	NA	IE,NE,NO	IE,NE,NO	IE,NE,NO	0.16
C. Metal Production	109.04	NA,NO	NO				13.68		NO	0.04	NA,NE,NO	NA,NE,NO	0.30
D. Other Production [3]	NA									IE	IE	0.56	IE
E. Production of Halocarbons and SF_6					NA,NO		NA		NA				
F. Consumption of Halocarbons and SF_6				176.46	168.79	NO	NA,NO	0.00	0.00				
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note: **A** = Actual emissions based on Tier 2 approach of the IPCC Guidelines.
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

Note: All footnotes for this table are given at the end of the table on sheet 3.

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREE USE GAS INVENTORIES (IPCC TABLE 7A)
(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emissions/removals	CH_4	N_2O	HFCs [1]		PFCs[1]		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)						(Gg)			
3. Solvent and Other Product Use	NA,NE,NO		**0.10**							NE	NE	**11.99**	NE
4. Agriculture		**52.21**	**2.79**							NA,NO	NA,NO	NE,NO	NO
A. Enteric Fermentation		31.73											
B. Manure Management		20.49	0.45									NE	
C. Rice Cultivation		NO										NO	
D. Agricultural Soils[4]		NO	2.34									NE	
E. Prescribed Burning of Savannas		NO	NO							NO	NO	NO	
F. Field Burning of Agricultural Residues		NA,NO	NA,NO							NO	NO	NO	
G. Other		NO	NO							NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	[5] **-8,575.95**	**0.05**	**0.27**							**0.00**	**0.68**	**0.05**	NE
A. Forest Land	[5] -11,138.33	0.05	0.00							0.00	0.68	0.05	
B. Cropland	[5] 1,612.65	NA	0.27							NA,NE	NA,NE	NA,NE	
C. Grassland	[5] 343.04	NA,NO	NA,NO							NA	NA	NA	
D. Wetlands	[5] NE,NO	NE,NO	NE,NO							NE	NE	NE	
E. Settlements	[5] 606.69	NE,NO	NE,NO							NE	NE	NE	
F. Other Land	[5] NA,NO	NO	NO							NE	NE	NE	
G. Other	[5] NE	NE	NE							NE	NE	NE	NE
6. Waste	**5.23**	**24.43**	**0.19**							**NA,NE,NO**	**NA,NE,NO**	**NA,NE,NO**	**NA,NE**
A. Solid Waste Disposal on Land	[6] NA,NO	16.95								NA,NE,NO	NA,NE,NO	NA,NE,NO	
B. Waste-water Handling		7.48	0.19							NA,NE	NA,NE	NA,NE	
C. Waste Incineration	[6] 5.23	NA,NO	0.00							NE	NE	NE	NE
D. Other	NA	NA	NA							NA	NA	NA	NA
7. Other *(please specify)* [7]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note: All footnotes for this table are given at the end of the table on sheet 3.

SUMMARY 1.A SUMMARY REPORT FOR NATIONAL GREENHOUSE GAS INVENTORIES (IPCC TABLE 7A)
(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emissions/removals	CH_4	N_2O	HFCs		PFCs		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)						(Gg)			
Memo Items: [8]													
International Bunkers	**132.67**	**0.00**	**0.03**							**0.01**	**0.01**	**0.00**	**0.00**
Aviation	73.06	0.00	0.00							0.01	0.01	0.00	0.00
Marine	59.61	0.00	0.02							NE	NE	NE	NE
Multilateral Operations	**0.38**	**0.00**	**0.00**							**NA**	**NA**	**NA**	**NA**
CO_2 Emissions from Biomass	**2,797.97**												

[1] The emissions of HFCs and PFCs are to be expressed as CO_2 equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

[2] For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the results from the Sectoral approach should be used, where possible.

[3] Other Production includes Pulp and Paper and Food and Drink Production.

[4] Parties which previously reported CO_2 from soils in the Agriculture sector should note this in the NIR.

[5] For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[6] CO_2 from source categories Solid Waste Disposal on Land and Waste Incineration should only be included if it stems from non-biogenic or inorganic waste streams. Only emissions from Waste Incineration Without Energy Recovery are to be reported in the Waste sector, whereas emissions from Incineration With Energy Recovery are to be reported in the Energy sector.

[7] If reporting any country-specific source category under sector "7. Other", detailed explanations should be provided in Chapter 9: Other (CRF sector 7) of the NIR.

[8] Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO_2 emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO_2 emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO_2 emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

SUMMARY 1.B SHORT SUMMARY REPORT FOR NATIC L GREENHOUSE GAS INVENTORIES (IPCC BLE 7B)

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emisions/removals	CH_4	N_2O	HFCs[1]		PFCs[1]		SF_6		NO_x	CO	NMVOC	SO_2
				P	A	P	A	P	A				
	(Gg)			CO_2 equivalent (Gg)						(Gg)			
Total National Emissions and Removals	7,527.40	96.99	3.94	176.46	168.79	NA,NO	13.68	0.00	0.00	44.67	155.92	33.66	10.37
1. Energy	15,369.68	20.13	0.58							44.62	155.24	20.63	9.64
A. Fuel Combustion — Reference Approach[2]	15,240.23												
A. Fuel Combustion — Sectoral Approach[2]	15,289.05	6.87	0.58							44.62	155.24	18.19	9.64
B. Fugitive Emissions from Fuels	80.63	13.26	NA,NO							NA,NE,NO	NA,NE,NO	2.44	NA,NE,NO
2. Industrial Processes	728.44	0.16	NA,NO	176.46	168.79	NA,NO	13.68	0.00	0.00	0.04	IE,NA,NE,NO	1.00	0.73
3. Solvent and Other Product Use	NA,NE,NO		0.10							NE	NE	11.99	NE
4. Agriculture [3]		52.21	2.79							NA,NO	NA,NO	NE,NO	NO
5. Land Use, Land-Use Change and Forestry	[4] -8,575.95	0.05	0.27							0.00	0.68	0.05	NE
6. Waste	5.23	24.43	0.19							NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Memo Items: [5]													
International Bunkers	132.67	0.00	0.03							0.01	0.01	0.00	0.00
Aviation	73.06	0.00	0.00							0.01	0.01	0.00	0.00
Marine	59.61	0.00	0.02							NE	NE	NE	NE
Multilateral Operations	0.38	0.00	0.00							NA	NA	NA	NA
CO_2 Emissions from Biomass	2,797.97												

Note: **A** = Actual emissions based on Tier 2 approach of the IPCC Guidelines.
P = Potential emissions based on Tier 1 approach of the IPCC Guidelines.

[1] The emissions of HFCs and PFCs are to be expressed as CO_2 equivalent emissions. Data on disaggregated emissions of HFCs and PFCs are to be provided in Table 2(II) of this common reporting format.

[2] For verification purposes, countries are asked to report the results of their calculations using the Reference approach and to explain any differences with the Sectoral approach in the documentation box to Table 1.A.(c). For estimating national total emissions, the result from the Sectoral approach should be used, where possible.

[3] Parties which previously reported CO_2 from soils in the Agriculture sector should note this in the NIR.

[4] For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[5] Countries are asked to report emissions from international aviation and marine bunkers and multilateral operations, as well as CO_2 emissions from biomass, under Memo Items. These emissions should not be included in the national total emissions from the energy sector. Amounts of biomass used as fuel are included in the national energy consumption but the corresponding CO_2 emissions are not included in the national total as it is assumed that the biomass is produced in a sustainable manner. If the biomass is harvested at an unsustainable rate, net CO_2 emissions are accounted for as a loss of biomass stocks in the Land Use, Land-use Change and Forestry sector.

SUMMARY 2 SUMMARY REPORT FOR CO_2 EQUIVALENT EMISSIONS
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2 [1]	CH_4	N_2O	HFCs [2]	PFCs [2]	SF_6 [2]	Total
	CO_2 equivalent (Gg)						
Total (Net Emissions) [1]	**7,527.40**	**2,036.72**	**1,220.02**	**168.79**	**13.68**	**16.54**	**10,983.15**
1. Energy	**15,369.68**	**422.68**	**180.11**				**15,972.47**
A. Fuel Combustion (Sectoral Approach)	15,289.05	144.22	180.11				15,613.39
1. Energy Industries	6,181.20	2.23	27.46				6,210.89
2. Manufacturing Industries and Construction	1,874.46	5.65	19.53				1,899.63
3. Transport	5,182.01	9.15	80.40				5,271.56
4. Other Sectors	2,048.52	127.19	52.70				2,228.41
5. Other	2.87	0.00	0.02				2.89
B. Fugitive Emissions from Fuels	80.63	278.45	NA,NO				359.08
1. Solid Fuels	80.63	249.34	NA,NO				329.97
2. Oil and Natural Gas	0.00	29.11	NO				29.11
2. Industrial Processes	**728.44**	**3.44**	**NA,NO**	**168.79**	**13.68**	**16.54**	**930.89**
A. Mineral Products	618.26	NA	NA				618.26
B. Chemical Industry	1.14	3.44	NA,NO	NA	NA	NA	4.58
C. Metal Production	109.04	NA,NO	NO	NA,NO	13.68	NO	122.72
D. Other Production	NA						NA
E. Production of Halocarbons and SF_6				NA,NO	NA	NA	NA,NO
F. Consumption of Halocarbons and SF_6 [2]				168.79	NA,NO	16.54	185.33
G. Other	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	**NA,NE,NO**		**30.38**				**30.38**
4. Agriculture		**1,096.48**	**866.36**				**1,962.85**
A. Enteric Fermentation		666.23					666.23
B. Manure Management		430.25	139.95				570.20
C. Rice Cultivation		NO					NO
D. Agricultural Soils [3]		NO	726.41				726.41
E. Prescribed Burning of Savannas		NO	NO				NO
F. Field Burning of Agricultural Residues		NA,NO	NA,NO				NA,NO
G. Other		NO	NO				NO
5. Land Use, Land-Use Change and Forestry [1]	**-8,575.95**	**0.99**	**84.06**				**-8,490.89**
A. Forest Land	-11,138.33	0.99	0.18				-11,137.16
B. Cropland	1,612.65	NA	83.88				1,696.53
C. Grassland	343.04	NA,NO	NA,NO				343.04
D. Wetlands	NE,NO	NE,NO	NE,NO				NE,NO
E. Settlements	606.69	NE,NO	NE,NO				606.69
F. Other Land	NA,NO	NO	NO				NA,NO
G. Other	NE	NE	NE				NE
6. Waste	**5.23**	**513.12**	**59.11**				**577.46**
A. Solid Waste Disposal on Land	NA,NO	356.00					356.00
B. Waste-water Handling		157.12	59.10				216.22
C. Waste Incineration	5.23	NA,NO	0.00				5.23
D. Other	NA	NA	NA				NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Memo Items: [4]							
International Bunkers	132.67	0.09	7.78				140.54
Aviation	73.06	0.02	0.63				73.72
Marine	59.61	0.06	7.14				66.82
Multilateral Operations	**0.38**	**0.00**	**0.00**				**0.38**
CO_2 Emissions from Biomass	**2,797.97**						**2,797.97**

Total CO_2 Equivalent Emissions without Land Use, Land-Use Change and Forestry	19,474.04
Total CO_2 Equivalent Emissions with Land Use, Land-Use Change and Forestry	10,983.15

[1] For CO_2 from Land Use, Land-use Change and Forestry the net emissions/removals are to be reported. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[2] Actual emissions should be included in the national totals. If no actual emissions were reported, potential emissions should be included.

[3] Parties which previously reported CO_2 from soils in the Agriculture sector should note this in the NIR.

[4] See footnote 8 to table Summary 1.A.

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMIS N FACTORS USED
(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6	
	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
1. Energy	M,T1,T2,T3	CS,D,M,PS	M,T1,T3	CS,D,M	M,T1	D,M						
A. Fuel Combustion	M,T1,T2	CS,D,M,PS	M,T1	D,M	M,T1	D,M						
1. Energy Industries	T1,T2	CS,D	T1	D	T1	D						
2. Manufacturing Industries and Construction	T1	CS,D,PS	T1	D	T1	D						
3. Transport	M,T1	D,M	M,T1	D,M	M,T1	D,M						
4. Other Sectors	T1	CS,D	T1	D	T1	D						
5. Other	T1	D	T1	D	T1	D						
B. Fugitive Emissions from Fuels	T1,T3	CS	T1,T3	CS,D	NA	NA						
1. Solid Fuels	T3	CS	T3	CS	NA	NA						
2. Oil and Natural Gas	T1,T3	CS	T1,T3	CS,D	NA	NA						
2. Industrial Processes	**CS,D,T2**	**CS,D,PS**	**D**	**D**	**NA**	**NA**	**T1,T2**	**CS,D**			**T2**	**CS,D**
A. Mineral Products	CS,D,T2	CS,D	NA	NA	NA	NA						
B. Chemical Industry	D	D	D	D	NA	NA	NA	NA	NA	NA	NA	NA
C. Metal Production	D,T2	D,PS	NA	NA	NA	NA	NA	NA	T3	PS	NA	NA
D. Other Production	NA	NA										
E. Production of Halocarbons and SF_6							NA	NA	NA	NA	NA	NA
F. Consumption of Halocarbons and SF_6							T1,T2	CS,D	NA	NA	T2	CS,D
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Use the following notation keys to specify the method applied:

D (IPCC default) **T1a, T1b, T1c** (IPCC Tier 1a, Tier 1b and Tier 1c, respectively) **CR** (CORINAIR)
RA (Reference Approach) **T2** (IPCC Tier 2) **CS** (Country Specific)
T1 (IPCC Tier 1) **T3** (IPCC Tier 3) **OTH** (Other)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information

Use the following notation keys to specify the emission factor used:

D (IPCC default) **CS** (Country Specific) **OTH** (Other)
CR (CORINAIR) **PS** (Plant Specific)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

SUMMARY 3 SUMMARY REPORT FOR METHODS AND EMISSION FACTORS USED
(Sheet 2 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6	
	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor	Method applied	Emission factor
3. Solvent and Other Product Use	NA	NA			D	D						
4. Agriculture			T1,T2	CS,D	D,T1,T1a,T1b	CS,D						
A. Enteric Fermentation			T1,T2	CS,D								
B. Manure Management			T1,T2	CS,D	D	CS,D						
C. Rice Cultivation			NA	NA								
D. Agricultural Soils			NA	NA	D,T1,T1a,T1b	CS,D						
E. Prescribed Burning of Savannas			NA	NA	NA	NA						
F. Field Burning of Agricultural Residues			NA	NA	NA	NA						
G. Other			NA	NA	NA	NA						
5. Land Use, Land-Use Change and Forestry	CS,D,T1,T2,T3	CS,D	D,T1	D	D,T1	D						
A. Forest Land	CS,D,T1,T2,T3	CS,D	D,T1	D	D,T1	D						
B. Cropland	D,T1,T2	CS,D	NA	NA	D,T1	D						
C. Grassland	D,T1,T2	CS,D	NA	NA	NA	NA						
D. Wetlands	NA	NA	NA	NA	NA	NA						
E. Settlements	D,T1	D	NA	NA	NA	NA						
F. Other Land	NA	NA	NA	NA	NA	NA						
G. Other	NA	NA	NA	NA	NA	NA						
6. Waste	D	D	T1,T2	CS,D	D,T1	D						
A. Solid Waste Disposal on Land	NA	NA	T2	CS,D								
B. Waste-water Handling			T1	CS,D	T1	D						
C. Waste Incineration	D	D	NA	NA	D	D						
D. Other	NA	NA	NA	NA	NA	NA						
7. Other (as specified in Summary 1.A)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Use the following notation keys to specify the method applied:

D (IPCC default) **T1a, T1b, T1c** (IPCC Tier 1a, Tier 1b and Tier 1c, respectively) **CR** (CORINAIR)
RA (Reference Approach) **T2** (IPCC Tier 2) **CS** (Country Specific)
T1 (IPCC Tier 1) **T3** (IPCC Tier 3) **OTH** (Other)

If using more than one method within one source category, list all the relevant methods. Explanations regarding country-specific methods, other methods or any modifications to the default IPCC methods, as well as information regarding the use of different methods per

Use the following notation keys to specify the emission factor used:

D (IPCC default) **CS** (Country Specific) **OTH** (Other)
CR (CORINAIR) **PS** (Plant Specific)

Where a mix of emission factors has been used, list all the methods in the relevant cells and give further explanations in the documentation box. Also use the documentation box to explain the use of notation OTH.

Documentation box:

- Parties should provide the full information on methodological issues, such as methods and emission factors used, in the relevant sections of Chapters 3 to 9 (see section 2.2 of each of Chapters 3 - 9) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.
- Where a mix of methods/emission factors has been used within one source category, use this documentation box to specify those methods/emission factors for the various sub-sources where they have been applied.
- Where the notation OTH (Other) has been entered in this table, use this documentation box to specify those other methods/emission factors.

TABLE 7 SUMMARY OVERVIEW FOR KEY CATEGORIES
(Sheet 1 of 1)

KEY CATEGORIES OF EMISSIONS AND REMOVALS	Gas	Criteria used for key source identification			Key category excluding LULUCF [1]	Key category including LULUCF [1]	Comments [1]
		L	T	Q			
Specify key categories according to the national level of disaggregation used:							
Aluminium Production	PFC		x			x	
Carbide Production	CO2		x			x	
Cement production	CO2	x	x			x	
CH4 from Enteric Fermentation in Dairy Cattle	CH4	x	x			x	
CH4 from Enteric Fermentation in Non-Dairy Cattle	CH4	x	x			x	
CH4 from Manure Management - Dairy Cattle	CH4	x				x	
CH4 from Manure Management - Non-dairy Cattle	CH4	x	x			x	
CH4 from Manure Management - Swine	CH4		x			x	
Cropland / Land converted to Cropland	CO2	x	x			x	
Cropland /Cropland remaining cropland	CO2	x	x			x	
Direct N2O emissions from Agricultural soils	N2O	x	x			x	
Forest Land remaining Forest Land	CO2	x	x			x	
Forest Land/Land Converted to Forest Land	CO2	x	x			x	
Fuel combustion in Agriculture/Forrestry	CO2	x	x			x	
Fugitive emissions: coal mining&handling	CH4	x	x			x	
Fugitive emissions: coal mining&handling	CO2		x			x	
Grassland/Land Converted to Grassland	CO2	x	x			x	
Indirect N2O from Nitrogen used in Agriculture	N2O	x	x			x	
Lime production	CO2		x			x	
Limestone and Dolomite Use CO2	CO2	x	x			x	
Manufacture of Solid Fuels	CO2		x			x	
Manufacturing Industries - Chemicals	CO2					x	
Manufacturing Industries - Food Processing, Beverages and Tobacco	CO2		x			x	
Manufacturing Industries - Iron and Steel	CO2	x	x			x	
Manufacturing Industries - Non-Ferrous Metals	CO2		x			x	
Manufacturing Industries - Pulp, Paper and Print	CO2	x	x			x	
Manufacturing Industries and Construction - Other	CO2	x	x			x	
Mobile combustion-Road vehicles	CO2	x	x			x	
N2O from Manure Management - Solid Storage and Dry Lot	N2O		x			x	
Petroleum Refining	CO2		x			x	
Public electricity and Heat Production	CO2	x	x			x	
Refrigeration and AC Equipment	HFC	x	x			x	
Settlements / Land concerted to Settlements	CO2	x	x			x	
Solid Waste Disposal	CH4	x				x	
Solvent and Other Product Use	N2O		x			x	
Stationary combustion - Commercial/Institutional	CO2	x				x	
Stationary combustion - Residental	CH4					x	
Stationary combustion - Residental	CO2	x				x	
Wastewater handling - Domestic and Commercial	CH4	x				x	
Wastewater handling - Industrial	CH4		x			x	

Note: L = Level assessment; T = Trend assessment; Q = Qualitative assessment.

[1] The term "key categories" refers to both the key source categories as addressed in the IPCC good practice guidance and the key categories as addressed in the IPCC good practice guidance for LULUCF.

[2] For estimating key categories Parties may chose the disaggregation level presented as an example in table 7.1 of the IPCC good practice guidance (page 7.6) and table 5.4.1 (page 5.31) of the IPCC good practice guidance for LULUCF, the level used in table Summary 1.A of the common reporting format or any other disaggregation level that the Party used to determine its key categories.

Documentation box:
Parties should provide the full information on methodologies used for identifying key categories and the quantitative results from the level and trend assessments (according to tables 7.1–7.3 of the IPCC good practice guidance and tables 5.4.1–5.4.3 of the IPCC good practice guidance for LULUCF) in Annex 1 to the NIR.

TABLE 8(a) RECALCULATION - RECALCULATED DATA
(Sheet 1 of 2)

Recalculated year: Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2						CH_4						N_2O					
	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF [2]	Impact of recalculation on total emissions including LULUCF[2]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF [2]	Impact of recalculation on total emissions including LULUCF[2]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF [2]	Impact of recalculation on total emissions including LULUCF[2]
	CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)		
Total National Emissions and Removals		7,527.40						2,036.72						1,220.02				
1. Energy		15,369.68						422.68						180.11				
1.A. Fuel Combustion Activities		15,289.05						144.22						180.11				
1.A.1. Energy Industries		6,181.20						2.23						27.46				
1.A.2. Manufacturing Industries and Construction		1,874.46						5.65						19.53				
1.A.3. Transport		5,182.01						9.15						80.40				
1.A.4. Other Sectors		2,048.52						127.19						52.70				
1.A.5. Other		2.87						0.00						0.02				
1.B. Fugitive Emissions from Fuels		80.63						278.45						NA,NO				
1.B.1. Solid fuel		80.63						249.34						NA,NO				
1.B.2. Oil and Natural Gas		0.00						29.11						NO				
2. Industrial Processes		**728.44**						**3.44**						NA,NO				
2.A. Mineral Products		618.26						NA						NA				
2.B. Chemical Industry		1.14						3.44						NA,NO				
2.C. Metal Production		109.04						NA,NO						NO				
2.D. Other Production		NA																
2.G. Other		NA						NA						NA				
3. Solvent and Other Product Use		NA,NE,NO												**30.38**				
4. Agriculture								1,096.48						**866.36**				
4.A. Enteric Fermentation								666.23						139.95				
4.B. Manure Management								430.25										
4.C. Rice Cultivation								NO						726.41				
4.D. Agricultural Soils [4]								NO						NO				
4.E. Prescribed Burning of Savannas								NO						NA,NO				
4.F. Field Burning of Agricultural Residues								NA,NO						NO				
4.G. Other								NO						84.06				
5. Land Use, Land-Use Change and Forestry (net)[5]		-8,575.95						0.99						0.18				
5.A. Forest Land		-11,138.33						0.99						83.88				
5.B. Cropland		1,612.65						NA						NA,NO				
5.C. Grassland		343.04						NA,NO						NE,NO				
5.D. Wetlands		NE,NO						NE,NO						NE,NO				
5.E. Settlements		606.69						NE,NO						NO				
5.F. Other Land		NA,NO						NO						NE				
5.G. Other		NE						NE										

Note: All footnotes for this table are given at the end of the table on sheet 2.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO_2						CH_4						N_2O					
	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]
	CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)		
6. Waste		5.23						513.12						59.11				
6.A. Solid Waste Disposal on Land		NA,NO						356.00						59.10				
6.B. Waste-water Handling								157.12						0.00				
6.C. Waste Incineration		5.23						NA,NO						NA				
6.D. Other		NA						NA						NA				
7. Other *(as specified in Summary 1.A)*		NA																
Memo Items:																		
International Bunkers		132.67						0.09						7.78				
Multilateral Operations		0.38						0.00						0.00				
CO_2 Emissions from Biomass		2,797.97																

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HFCs						PFCs						SF_6					
	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]	Previous submission	Latest submission	Difference	Difference[1]	Impact of recalculation on total emissions excluding LULUCF[2]	Impact of recalculation on total emissions including LULUCF[3]
	CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)			CO_2 equivalent (Gg)			(%)		
Total Actual Emissions		168.79						13.68						16.54				
2.C.3. Aluminium Production								13.68						16.54				
2.E. Production of Halocarbons and SF_6		NA,NO						NA						NA				
2.F. Consumption of Halocarbons and SF_6		168.79						NA,NO						16.54				
2.G. Other		NA						NA						NA				
Potential Emissions from Consumption of HFCs/PFCs and SF_6		176.46						NO						32.98				

	Previous submission	Latest submission	Difference	Difference[1]
	CO_2 equivalent (Gg)			(%)
Total CO_2 Equivalent Emissions with Land Use, Land-Use Change and Forestry		10,983.15		
Total CO_2 Equivalent Emissions without Land Use, Land-Use Change and Forestry		19,474.04		

[1] Estimate the percentage change due to recalculation with respect to the previous submission (percentage change = 100 x [(LS-PS)/PS], where LS = latest submission and PS = previous submission. All cases of recalculation of the estimate of the source/sink category should be addressed and explained in table 8(b).

[2] Total emissions refer to total aggregate GHG emissions expressed in terms of CO_2 equivalent, excluding GHGs from the LULUCF sector. The impact of the recalculation on the total emissions is calculated as follows: impact of recalculation (%) = 100 x [(source (LS) - source (PS))/total emissions (LS)], where LS = latest submission, PS = previous submission.

[3] Total emissions refer to total aggregate GHG emissions expressed in terms of CO_2 equivalent, including GHGs from the LULUCF sector. The impact of the recalculation on the total emissions is calculated as follows: impact of recalculation (%) = 100 x [(source (LS) - source (PS))/total emissions (LS)], where LS = latest submission, PS = previous submission.

[4] Parties which previously reported CO_2 from soils in the Agriculture sector should note this in the NIR.

[5] Net CO_2 emissions/removals to be reported.

Documentation box:

Parties should provide detailed information on recalculations in Chapter 10: Recalculations and Improvements, and in the relevant sections of Chapters 3 to 9 (see section 2.5 of each of Chapters 3 - 9) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.

TABLE 8(b) RECALCULATION - EXPLANATORY INFORMATION
(Sheet 1 of 1)

Specify the sector and source/sink category[1] where changes in estimates have occurred:	GHG	RECALCULATION DUE TO				
		CHANGES IN:				
		Methods [2]	Emission factors [2]	Activity data [2]	Addition/removal/ reallocation of source/sink categories	Other changes in data (e.g. statistical or editorial changes, correction of errors)

[1] Enter the identification code of the source/sink category (e.g. 1.B.1) in the first column and the name of the category (e.g. Fugitive Emissions from Solid Fuels) in the second column of the table. Note that the source categories entered in this table should match those used in table 8(a).
[2] Explain changes in methods, emission factors and activity data that have resulted in recalculation of the estimate of the source/sink as indicated in table 8(a). Include changes in the assumptions and coefficients in the Methods column.

Documentation box:

Parties should provide the full information on recalculations in Chapter 10: Recalculations and Improvements, and in the relevant sections of Chapters 3 to 9 (see section 2.5 of each of Chapters 3 to 9) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table. References should point particularly to the sections of the NIR in which justifications of the changes as to improvements in the accuracy, completeness and consistency of the inventory are reported.

TABLE 9(a) COMPLETENESS - INFORMATION ON NOTATION I
(Sheet 1 of 1)

Sources and sinks not estimated (NE)[1]

GHG	Sector[2]	Source/sink category [2]	Explanation
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
Carbon	5 LULUCF	5.D.1 5.D.1 Wetlands remaining Wetlands	Negligible! No data available for emission calculations.
CH4	4 Agriculture	4.A 4.A Enteric Fermentation	No method available
CH4	5 LULUCF	5.D.2 5.D.2 Land converted to Wetlands	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.E.2 Land converted to Settlements	Negligible! No data available for emission calculations.
CH4	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
CH4	6 Waste	6.B.1 6.B.1 Industrial Wastewater	No data available
CO2	3 Solvent and Other Product Use	3.B Degreasing and Dry Cleaning	No data and method available for calculations.
CO2	3 Solvent and Other Product Use	3.C Chemical Products, Manufacture and Processing	No data and method available for calculations.
CO2	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
HFCs	2 Industrial Processes	2.F.1 Refrigeration and Air Conditioning Equipment	No data available for calculations.
HFCs	2 Industrial Processes	2.F.2 Foam Blowing	No data available for calculations.
HFCs	2 Industrial Processes	2.F.3 Fire Extinguishers	No data available for calculations.
N2O	3 Solvent and Other Product Use	3.B Degreasing and Dry Cleaning	No data available for calculations.
N2O	3 Solvent and Other Product Use	3.D.3 N2O from Aerosol Cans	No data available for calculations.
N2O	5 LULUCF	5.D.2 5.D.2 Land converted to Wetlands	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.E.1 Settlements remaining Settlements	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.E.2 Land converted to Settlements	Negligible! No data available for emission calculations.
N2O	5 LULUCF	5.G Harvested Wood Products	No data available for calculations.
SF6	2 Industrial Processes	2.F.8 Electrical Equipment	No data available for calculations.
SF6	2 Industrial Processes	2.F.P2.2 In products	No data available
SF6	2 Industrial Processes	2.F.P3.2 In products	No data available for calculations.

Sources and sinks reported elsewhere (IE)[3]

GHG	Source/sink category	Allocation as per IPCC Guidelines	Allocation used by the Party	Explanation
Carbon	4.1 Cropland remaining Cropland			Results are included in losses.
Carbon	Cropland converted to Grassland			Results are included in losses.
CH4	Commercial (w/o human sewage)	6.B.2.1 Wastewater	6.B.2.1 Sludge	Total ammount of recovery from WW treatment is reported under sludge
CH4	1.AA.3.D Navigation	1.A.3.D Gas/Diesel Oil	1.A.3.B Gas/Diesel Oil	No separate data available
CH4	2 Land converted to Forest Land	Included in Forest land remaining Forest Land		
CO2	1.AA.3.D Navigation	1.A.3.D Gas/Diesel Oil	1.A.3.B Gas/Diesel Oil	Disaggregated data is not available
CO2	2 Land converted to Forest Land	5.A.2 5(V)	5.A.1 5(V)	Included in Forest land remaining Forest Land
CO2	4.1 Cropland remaining Cropland	5.B.1 5(IV) Dolomite	5.B.1 5(IV) Limestone	No separate data available
CO2	Grassland remaining Grassland	5.C.1.5(IV) limeston	5.B.1.5(IV) limestone	Disaggregated data are not available
CO2	Grassland remaining Grassland	5.C.1.5(IV) dolomite	5.B.1.5(IV) limestone	Disaggregated data are not available
N2O	3.D.2 Fire Extinguishers		Included in the N2O use for anaesthesia.	It is very minor source.
N2O	3.D.4 Other Use of N2O		Included in the N2O use for anaesthesia.	It is very minor source.
N2O	1.AA.3.D Navigation	1.A.3.D Gas/Diesel Oil	1.A.3.B Gas/Diesel Oil	No separate data available
N2O	2 Land converted to Forest Land	Included in Forest Land remaining Forest Land		

[1] Clearly indicate sources and sinks which are considered in the IPCC Guidelines but are not considered in the submitted inventory. Explain the reason for excluding these sources and sinks, in order to avoid arbitrary interpretations. An entry should be made for each source/sink category for which the notation key NE (not estimated) is entered in the sectoral tables.

[2] Indicate omitted source/sink following the IPCC source/sink category structure (e.g. sector: Waste, source category: Waste-Water Handling).

[3] Clearly indicate sources and sinks in the submitted inventory that are allocated to a sector other than that indicated by the IPCC Guidelines. Show the sector indicated in the IPCC Guidelines and the sector to which the source or sink is allocated in the submitted inventory. Explain the reason for reporting these sources and sinks in a different sector. An entry should be made for each source/sink for which the notation key IE (included elsewhere) is used in the sectoral tables.

TABLE 9(b) COMPLETENESS - INFORMATION C DDITIONAL GREENHOUSE GASES
(Sheet 1 of 1)

Additional GHG emissions reported[1]						
GHG	**Source category**	**Emissions (Gg)**	**Estimated GWP value (100-year horizon)**	**Emissions CO_2 equivalent (Gg)**	**Reference to the source of GWP value**	**Explanation**

[1] Parties are encouraged to provide information on emissions of greenhouse gases whose GWP values have not yet been agreed upon by the COP. Include such gases in this table if they are considered in the submitted inventory. Provide additional information on the estimation methods used.

Documentation box:

Parties should provide detailed information regarding completeness of the inventory in the NIR (Chapter 1.8: General Assessment of the Completeness, and Annex 5). Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.

TABLE 10 EMISSION TRENDS
CO_2
(Part 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	**15,289.07**	**14,751.24**	**14,400.93**	**14,377.98**	**13,716.13**	**12,895.50**	**12,883.59**	**13,388.07**	**13,368.83**	**14,178.74**
A. Fuel Combustion (Sectoral Approach)	15,168.83	14,637.93	14,288.42	14,253.82	13,617.75	12,804.73	12,785.74	13,297.89	13,283.30	14,092.54
1. Energy Industries	6,700.71	6,349.31	6,432.59	6,536.97	6,238.74	5,321.33	5,840.14	5,620.14	5,230.61	5,601.04
2. Manufacturing Industries and Construction	4,352.11	3,856.82	3,633.43	3,409.44	3,085.37	3,029.00	2,637.60	2,480.12	2,640.31	2,586.89
3. Transport	1,979.04	2,263.49	2,439.36	2,470.46	2,671.71	2,522.53	2,604.70	3,005.27	3,312.24	3,635.52
4. Other Sectors	2,136.97	2,168.30	1,783.04	1,836.96	1,621.93	1,931.87	1,703.30	2,192.36	2,100.14	2,269.09
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	120.24	113.32	112.51	124.15	98.39	90.77	97.86	90.18	85.53	86.20
1. Solid Fuels	120.24	113.31	112.50	124.15	98.38	90.76	97.85	90.17	85.53	86.20
2. Oil and Natural Gas	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2. Industrial Processes	**1,015.81**	**1,000.05**	**1,072.11**	**1,036.41**	**1,036.70**	**870.86**	**805.11**	**665.94**	**820.83**	**835.34**
A. Mineral Products	783.64	746.49	792.77	747.64	715.26	595.43	543.48	438.30	558.96	597.45
B. Chemical Industry	44.99	53.05	54.83	49.46	36.73	27.98	23.05	21.88	31.74	26.86
C. Metal Production	187.19	200.51	224.51	239.31	284.71	247.46	238.58	205.75	230.13	211.03
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry[1]	**-7,689.87**	**-7,680.29**	**-7,653.25**	**-7,652.23**	**-7,295.18**	**-7,279.47**	**-7,318.36**	**-7,352.26**	**-7,347.14**	**-7,318.10**
A. Forest Land	-9,429.21	-9,435.54	-9,423.30	-9,435.58	-9,387.88	-9,391.34	-9,430.69	-9,473.52	-9,479.85	-9,467.81
B. Cropland	1,206.66	1,222.57	1,237.37	1,250.66	1,323.77	1,342.94	1,343.41	1,352.33	1,363.78	1,380.79
C. Grassland	64.35	64.35	64.35	64.35	222.21	222.21	222.21	222.21	222.21	222.21
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	468.34	468.34	468.34	468.34	546.71	546.71	546.71	546.71	546.71	546.71
F. Other Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**1.34**	**1.34**	**1.34**	**1.34**	**0.86**	**0.44**
A. Solid Waste Disposal on Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
B. Waste-water Handling										
C. Waste Incineration	NO	NO	NO	NO	1.34	1.34	1.34	1.34	0.86	0.44
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total CO_2 emissions including net CO_2 from LULUCF	**8,615.01**	**8,071.00**	**7,819.79**	**7,762.16**	**7,458.98**	**6,488.23**	**6,371.69**	**6,703.09**	**6,843.38**	**7,696.42**
Total CO_2 emissions excluding net CO_2 from LULUCF	**16,304.88**	**15,751.29**	**15,473.04**	**15,414.39**	**14,754.17**	**13,767.70**	**13,690.04**	**14,055.35**	**14,190.52**	**15,014.52**
Memo Items:										
International Bunkers	**97.49**	**89.05**	**84.16**	**81.10**	**79.26**	**27.54**	**34.27**	**48.35**	**53.86**	**57.53**
Aviation	97.49	89.05	84.16	81.10	79.26	27.54	34.27	48.35	53.86	57.53
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass	2,253.74	2,212.24	2,170.74	2,129.24	2,088.44	2,031.99	2,043.97	2,032.32	2,060.51	2,036.30

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
CO_2
(Part 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	**14,844.25**	**15,136.57**	**14,880.46**	**14,236.87**	**14,325.86**	**15,180.44**	**15,338.92**	**15,044.37**	**15,369.46**	**15,599.85**
A. Fuel Combustion (Sectoral Approach)	14,760.74	15,049.25	14,794.40	14,156.50	14,246.87	15,107.60	15,255.22	14,957.70	15,283.21	15,518.58
1. Energy Industries	5,213.83	5,624.80	5,858.67	5,170.94	5,473.41	6,175.95	6,423.62	6,156.90	6,286.40	6,296.73
2. Manufacturing Industries and Construction	2,449.16	2,189.79	2,253.82	2,271.63	2,240.46	2,182.16	2,216.03	2,129.40	2,242.40	2,449.82
3. Transport	4,206.40	4,269.81	3,686.06	3,503.43	3,646.08	3,775.63	3,786.36	3,923.67	4,070.90	4,342.06
4. Other Sectors	2,891.35	2,964.85	2,995.86	3,210.49	2,886.92	2,973.87	2,829.20	2,747.74	2,683.51	2,429.96
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	83.52	87.31	86.06	80.37	78.99	72.83	83.71	86.67	86.25	81.28
1. Solid Fuels	83.51	87.31	86.05	80.37	78.99	72.83	83.70	86.67	86.25	81.28
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Industrial Processes	**838.51**	**857.32**	**849.43**	**864.81**	**884.77**	**942.75**	**931.40**	**980.19**	**1,004.14**	**1,070.46**
A. Mineral Products	616.57	635.96	650.28	660.51	671.22	714.58	642.64	670.39	690.29	749.44
B. Chemical Industry	26.38	30.48	33.09	31.63	27.96	36.65	33.14	41.02	43.00	46.17
C. Metal Production	195.56	190.89	166.05	172.66	185.59	191.53	255.62	268.77	270.84	274.85
D. Other Production	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry[3]	**-7,298.45**	**-7,275.19**	**-7,215.10**	**-7,259.74**	**-7,280.71**	**-8,506.88**	**-8,504.09**	**-8,288.39**	**-8,507.00**	**-8,490.50**
A. Forest Land	-9,461.71	-9,449.24	-9,409.17	-9,468.01	-9,500.64	-10,965.22	-10,995.36	-10,778.97	-11,009.66	-11,006.73
B. Cropland	1,394.33	1,405.13	1,425.14	1,439.35	1,451.00	1,508.61	1,541.54	1,540.84	1,552.93	1,566.50
C. Grassland	222.21	222.21	222.21	222.21	222.21	343.04	343.04	343.04	343.04	343.04
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	546.71	546.71	546.71	546.71	546.71	606.69	606.69	606.69	606.69	606.69
F. Other Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**0.64**	**0.30**	**0.72**	**1.76**	**2.16**	**2.19**	**1.92**	**2.72**	**2.37**	**2.27**
A. Solid Waste Disposal on Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
B. Waste-water Handling										
C. Waste Incineration	0.64	0.30	0.72	1.76	2.16	2.19	1.92	2.72	2.37	2.27
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other ***(as specified in Summary 1.A)***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CO_2 emissions including net CO_2 from LULUCF	**8,384.95**	**8,718.99**	**8,515.51**	**7,843.71**	**7,932.07**	**7,618.50**	**7,768.15**	**7,738.88**	**7,868.97**	**8,182.08**
Total CO_2 emissions excluding net CO_2 from LULUCF	**15,683.40**	**15,994.19**	**15,730.61**	**15,103.45**	**15,212.79**	**16,125.38**	**16,272.24**	**16,027.27**	**16,375.97**	**16,672.59**
Memo Items:										
International Bunkers	**53.28**	**56.23**	**51.76**	**61.80**	**71.09**	**80.27**	**82.64**	**79.02**	**60.22**	**64.57**
Aviation	53.28	56.23	51.76	61.80	71.09	80.27	82.64	79.02	60.22	64.57
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass	2,081.26	2,113.08	2,135.61	1,867.50	1,896.76	1,884.66	1,947.48	2,093.96	2,167.49	2,298.51

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
CO_2
(Part 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2006	2007	2008	2009	2010	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	%
1. Energy	**15,740.46**	**15,846.14**	**16,872.24**	**15,322.59**	**15,369.68**	**0.53**
A. Fuel Combustion (Sectoral Approach)	15,659.47	15,764.31	16,790.47	15,242.73	15,289.05	0.79
1. Energy Industries	6,350.37	6,566.80	6,355.82	6,056.15	6,181.20	-7.75
2. Manufacturing Industries and Construction	2,550.27	2,311.18	2,268.76	1,888.24	1,874.46	-56.93
3. Transport	4,554.80	5,127.81	6,044.00	5,243.27	5,182.01	161.84
4. Other Sectors	2,204.04	1,758.52	2,118.36	2,051.75	2,048.52	-4.14
5. Other	NA	NA	3.53	3.31	2.87	100.00
B. Fugitive Emissions from Fuels	80.99	81.83	81.77	79.86	80.63	-32.95
1. Solid Fuels	80.99	81.83	81.77	79.85	80.63	-32.94
2. Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	-55.74
2. Industrial Processes	**1,119.23**	**1,143.47**	**1,087.06**	**738.18**	**728.44**	**-28.29**
A. Mineral Products	811.76	854.05	884.77	652.29	618.26	-21.10
B. Chemical Industry	46.20	34.28	14.19	0.83	1.14	-97.46
C. Metal Production	261.27	255.13	188.11	85.06	109.04	-41.75
D. Other Production	NA	NA	NA	NA	NA	0.00
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA	NA	NA	NA	NA	0.00
3. Solvent and Other Product Use	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	NA,NE,NO	0.00
4. Agriculture						
A. Enteric Fermentation						
B. Manure Management						
C. Rice Cultivation						
D. Agricultural Soils						
E. Prescribed Burning of Savannas						
F. Field Burning of Agricultural Residues						
G. Other						
5. Land Use, Land-Use Change and Forestry[2]	**-8,349.07**	**-8,489.02**	**-8,492.44**	**-8,477.23**	**-8,575.95**	**11.52**
A. Forest Land	-10,875.79	-11,027.51	-11,043.13	-11,039.61	-11,138.33	18.13
B. Cropland	1,576.99	1,588.75	1,600.96	1,612.65	1,612.65	33.65
C. Grassland	343.04	343.04	343.04	343.04	343.04	433.10
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	0.00
E. Settlements	606.69	606.69	606.69	606.69	606.69	29.54
F. Other Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
G. Other	NE	NE	NE	NE	NE	0.00
6. Waste	**2.75**	**3.40**	**3.57**	**4.41**	**5.23**	**100.00**
A. Solid Waste Disposal on Land	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
B. Waste-water Handling						
C. Waste Incineration	2.75	3.40	3.57	4.41	5.23	100.00
D. Other	NA	NA	NA	NA	NA	0.00

7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**0.00**
Total CO_2 emissions including net CO_2 from LULUCF	**8,513.37**	**8,503.98**	**9,470.44**	**7,587.95**	**7,527.40**	**-12.62**
Total CO_2 emissions excluding net CO_2 from LULUCF	**16,862.44**	**16,993.01**	**17,962.88**	**16,065.18**	**16,103.35**	**-1.24**
Memo Items:						
International Bunkers	**167.04**	**254.78**	**316.21**	**182.23**	**132.67**	**36.09**
Aviation	73.48	97.29	103.80	77.74	73.06	-25.06
Marine	93.56	157.50	212.40	104.49	59.61	100.00
Multilateral Operations	NA	NA	0.45	0.41	0.38	100.00
CO_2 Emissions from Biomass	2,258.24	2,229.81	2,520.75	2,583.46	2,797.97	24.15

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
CH_4
(Part 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	28.69	27.72	26.86	26.91	24.99	24.29	25.44	24.03	23.11	23.08
A. Fuel Combustion (Sectoral Approach)	8.91	8.65	7.85	7.85	7.81	8.01	7.81	7.78	7.61	7.53
1. Energy Industries	0.09	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.08
2. Manufacturing Industries and Construction	0.49	0.45	0.42	0.39	0.36	0.32	0.28	0.27	0.27	0.26
3. Transport	1.12	1.29	1.38	1.41	1.46	1.39	1.53	1.69	1.76	1.77
4. Other Sectors	7.20	6.82	5.97	5.96	5.90	6.23	5.93	5.75	5.50	5.42
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	19.79	19.08	19.01	19.06	17.18	16.28	17.63	16.25	15.51	15.55
1. Solid Fuels	17.09	16.24	16.15	16.28	14.42	13.45	14.57	13.38	12.77	12.96
2. Oil and Natural Gas	2.70	2.84	2.86	2.79	2.76	2.83	3.06	2.88	2.74	2.60
2. Industrial Processes	**0.18**	**0.17**	**0.31**	**0.26**	**0.16**	**0.17**	**0.01**	**0.03**	**0.12**	**0.19**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	0.18	0.17	0.31	0.26	0.16	0.17	0.01	0.03	0.12	0.19
C. Metal Production	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use										
4. Agriculture	**54.71**	**54.64**	**54.00**	**53.55**	**53.93**	**50.72**	**53.31**	**51.47**	**51.73**	**51.18**
A. Enteric Fermentation	32.41	31.87	31.77	31.74	31.23	29.71	30.23	28.97	29.31	30.79
B. Manure Management	22.30	22.77	22.23	21.81	22.70	21.01	23.08	22.50	22.42	20.39
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**NA,NE,NO**	**NA,NE,NO**	**0.11**	**0.07**	**0.38**	**0.40**	**0.21**	**NA,NE,NO**	**NA,NE,NO**	**0.10**
A. Forest Land	NA,NO	NA,NO	0.11	0.07	0.38	0.40	0.21	NA,NO	NA,NO	0.10
B. Cropland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**24.20**	**24.78**	**25.35**	**26.09**	**25.81**	**25.44**	**25.03**	**24.81**	**25.04**	**25.17**
A. Solid Waste Disposal on Land	14.23	14.79	15.35	16.01	16.43	16.69	17.06	17.42	17.78	17.93
B. Waste-water Handling	9.97	9.99	10.00	10.07	9.37	8.75	7.98	7.39	7.27	7.24
C. Waste Incineration	NO	NO	NO	NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total CH_4 emissions including CH_4 from LULUCF	**107.78**	**107.32**	**106.62**	**106.87**	**105.27**	**101.02**	**104.00**	**100.34**	**100.01**	**99.71**
Total CH_4 emissions excluding CH_4 from LULUCF	**107.78**	**107.32**	**106.51**	**106.80**	**104.89**	**100.63**	**103.80**	**100.34**	**100.01**	**99.61**
Memo Items:										
International Bunkers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
CH_4
(Part 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	22.53	23.06	22.34	21.17	20.75	19.11	20.42	20.75	20.49	19.74
A. Fuel Combustion (Sectoral Approach)	7.64	7.40	7.02	6.80	6.69	6.09	6.05	6.06	6.00	6.00
1. Energy Industries	0.07	0.06	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.08
2. Manufacturing Industries and Construction	0.28	0.28	0.29	0.22	0.22	0.27	0.29	0.32	0.34	0.37
3. Transport	1.86	1.73	1.37	1.21	1.15	1.07	0.97	0.88	0.76	0.69
4. Other Sectors	5.44	5.33	5.29	5.31	5.25	4.67	4.73	4.79	4.84	4.86
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	14.88	15.66	15.33	14.37	14.06	13.02	14.37	14.69	14.49	13.74
1. Solid Fuels	12.37	13.26	13.11	12.23	12.01	11.08	12.56	12.94	12.89	12.17
2. Oil and Natural Gas	2.51	2.40	2.22	2.15	2.06	1.95	1.81	1.75	1.60	1.57
2. Industrial Processes	0.16	0.25	0.26	0.27	0.26	0.28	0.24	0.30	0.25	0.29
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	0.16	0.25	0.26	0.27	0.26	0.28	0.24	0.30	0.25	0.29
C. Metal Production	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use										
4. Agriculture	49.77	48.72	50.24	49.45	53.61	53.00	55.33	53.00	51.29	52.02
A. Enteric Fermentation	30.40	28.90	29.66	30.95	33.06	32.39	33.02	31.40	30.98	31.52
B. Manure Management	19.37	19.82	20.58	18.49	20.55	20.61	22.31	21.60	20.31	20.50
C. Rice Cultivation	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Agricultural Soils	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	0.18	0.28	0.55	0.25	0.10	0.19	0.06	1.34	0.07	0.12
A. Forest Land	0.18	0.28	0.55	0.25	0.10	0.19	0.06	1.34	0.07	0.12
B. Cropland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	NE	NE	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	25.32	26.79	27.72	28.61	29.55	30.00	30.68	30.91	30.58	31.06
A. Solid Waste Disposal on Land	18.15	18.80	19.48	20.17	20.90	21.55	22.10	22.42	22.98	23.16
B. Waste-water Handling	7.17	7.99	8.24	8.44	8.64	8.46	8.58	8.49	7.60	7.90
C. Waste Incineration	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CH_4 emissions including CH_4 from LULUCF	97.95	99.10	101.10	99.74	104.26	102.59	106.74	106.29	102.68	103.22
Total CH_4 emissions excluding CH_4 from LULUCF	97.78	98.82	100.56	99.49	104.17	102.39	106.68	104.96	102.61	103.10
Memo Items:										
International Bunkers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
CH_4
(Part 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2006	2007	2008	2009	2010	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	%
1. Energy	19.60	19.50	19.65	19.80	20.13	-29.85
A. Fuel Combustion (Sectoral Approach)	5.96	5.91	6.10	6.53	6.87	-22.89
1. Energy Industries	0.09	0.09	0.14	0.11	0.11	17.87
2. Manufacturing Industries and Construction	0.35	0.30	0.30	0.26	0.27	-45.58
3. Transport	0.62	0.57	0.57	0.48	0.44	-61.02
4. Other Sectors	4.91	4.94	5.08	5.69	6.06	15.92
5. Other	NA	NA	0.00	0.00	0.00	100.00
B. Fugitive Emissions from Fuels	13.64	13.59	13.55	13.27	13.26	-32.99
1. Solid Fuels	12.12	12.12	12.11	11.87	11.87	-30.53
2. Oil and Natural Gas	1.52	1.48	1.44	1.40	1.39	-48.59
2. Industrial Processes	**0.26**	**0.30**	**0.18**	**0.21**	**0.16**	**-7.26**
A. Mineral Products	NA	NA	NA	NA	NA	0.00
B. Chemical Industry	0.26	0.30	0.18	0.21	0.16	-7.26
C. Metal Production	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
D. Other Production						
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA	NA	NA	NA	NA	0.00
3. Solvent and Other Product Use						
4. Agriculture	**52.50**	**54.62**	**52.49**	**52.55**	**52.21**	**-4.56**
A. Enteric Fermentation	31.60	33.05	32.33	32.08	31.73	-2.10
B. Manure Management	20.90	21.58	20.15	20.47	20.49	-8.14
C. Rice Cultivation	NO	NO	NO	NO	NO	0.00
D. Agricultural Soils	NO	NO	NO	NO	NO	0.00
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	0.00
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
G. Other	NO	NO	NO	NO	NO	0.00
5. Land Use, Land-Use Change and Forestry	**0.91**	**0.09**	**0.04**	**0.10**	**0.05**	**100.00**
A. Forest Land	0.91	0.09	0.04	0.10	0.05	100.00
B. Cropland	NA	NA	NA	NA	NA	0.00
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	0.00
E. Settlements	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	0.00
F. Other Land	NO	NO	NO	NO	NO	0.00
G. Other	NE	NE	NE	NE	NE	0.00
6. Waste	**31.83**	**30.02**	**26.50**	**24.75**	**24.43**	**0.98**
A. Solid Waste Disposal on Land	22.68	21.59	19.04	17.20	16.95	19.14
B. Waste-water Handling	9.15	8.43	7.47	7.54	7.48	-24.94
C. Waste Incineration	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
D. Other	NA	NA	NA	NA	NA	0.00
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**0.00**
Total CH_4 emissions including CH_4 from LULUCF	**105.10**	**104.52**	**98.86**	**97.41**	**96.99**	**-10.01**

Total CH_4 emissions excluding CH_4 from LULUCF	**104.19**	**104.44**	**98.82**	**97.30**	**96.94**	**-10.06**
Memo Items:						
International Bunkers	0.01	0.01	0.01	0.01	0.00	200.30
Aviation	0.00	0.00	0.00	0.00	0.00	-25.06
Marine	0.00	0.01	0.01	0.01	0.00	100.00
Multilateral Operations	NA	NA	0.00	0.00	0.00	100.00
CO_2 Emissions from Biomass						

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
N_2O
(Part 1 of 3)

Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	**0.58**	**0.56**	**0.54**	**0.53**	**0.51**	**0.49**	**0.47**	**0.49**	**0.55**	**0.60**
A. Fuel Combustion (Sectoral Approach)	0.58	0.56	0.54	0.53	0.51	0.49	0.47	0.49	0.55	0.60
1. Energy Industries	0.09	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.07	0.08
2. Manufacturing Industries and Construction	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.06	0.06	0.07
3. Transport	0.12	0.13	0.14	0.14	0.15	0.15	0.14	0.18	0.22	0.27
4. Other Sectors	0.24	0.23	0.22	0.21	0.20	0.20	0.19	0.18	0.19	0.17
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
1. Solid Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
2. Oil and Natural Gas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Industrial Processes	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C. Metal Production	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	0.26	0.23	0.20	0.17	0.14	0.12	0.09	0.06	0.06	0.06
4. Agriculture	**3.45**	**3.56**	**3.43**	**3.28**	**3.25**	**3.04**	**3.43**	**3.11**	**3.13**	**3.13**
A. Enteric Fermentation										
B. Manure Management	0.89	0.87	0.87	0.86	0.84	0.80	0.76	0.68	0.66	0.68
C. Rice Cultivation										
D. Agricultural Soils	2.56	2.68	2.56	2.42	2.41	2.24	2.67	2.43	2.47	2.46
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**0.27**	**0.27**	**0.27**	**0.27**	**0.28**	**0.28**	**0.27**	**0.27**	**0.27**	**0.27**
A. Forest Land	NA,NO	NA,NO	0.00	0.00	0.00	0.00	0.00	NA,NO	NA,NO	0.00
B. Cropland	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**0.19**	**0.19**	**0.18**	**0.18**	**0.19**	**0.18**	**0.14**	**0.16**	**0.17**	**0.18**
A. Solid Waste Disposal on Land										
B. Waste-water Handling	0.19	0.19	0.18	0.18	0.19	0.18	0.14	0.16	0.17	0.18
C. Waste Incineration	NO	NO	NO	NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total N_2O emissions including N_2O from LULUCF	**4.76**	**4.81**	**4.63**	**4.44**	**4.37**	**4.11**	**4.41**	**4.10**	**4.19**	**4.24**
Total N_2O emissions excluding N_2O from LULUCF	**4.49**	**4.54**	**4.35**	**4.17**	**4.10**	**3.83**	**4.13**	**3.83**	**3.92**	**3.97**
Memo Items:										
International Bunkers	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
N_2O
(Part 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)
1. Energy	**0.66**	**0.67**	**0.64**	**0.60**	**0.62**	**0.62**	**0.61**	**0.60**	**0.60**	**0.62**
A. Fuel Combustion (Sectoral Approach)	0.66	0.67	0.64	0.60	0.62	0.62	0.61	0.60	0.60	0.62
1. Energy Industries	0.07	0.08	0.08	0.07	0.07	0.08	0.09	0.08	0.08	0.09
2. Manufacturing Industries and Construction	0.08	0.08	0.08	0.07	0.08	0.07	0.07	0.07	0.09	0.09
3. Transport	0.34	0.34	0.30	0.29	0.30	0.30	0.29	0.28	0.27	0.27
4. Other Sectors	0.17	0.17	0.18	0.17	0.17	0.17	0.16	0.17	0.16	0.16
5. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Fugitive Emissions from Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
1. Solid Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
2. Oil and Natural Gas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. Industrial Processes	**NA,NO**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
A. Mineral Products	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Chemical Industry	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C. Metal Production	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Other Production										
E. Production of Halocarbons and SF_6										
F. Consumption of Halocarbons and SF_6										
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	0.06	0.06	0.09	0.10	0.14	0.12	0.12	0.11	0.13	0.14
4. Agriculture	**3.07**	**3.16**	**3.21**	**3.20**	**3.26**	**3.21**	**3.28**	**3.14**	**2.95**	**2.95**
A. Enteric Fermentation										
B. Manure Management	0.66	0.66	0.65	0.64	0.64	0.62	0.63	0.57	0.53	0.53
C. Rice Cultivation										
D. Agricultural Soils	2.41	2.50	2.56	2.56	2.62	2.59	2.65	2.57	2.42	2.42
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
5. Land Use, Land-Use Change and Forestry	**0.27**	**0.27**	**0.28**	**0.27**	**0.27**	**0.27**	**0.27**	**0.29**	**0.27**	**0.27**
A. Forest Land	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00
B. Cropland	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
E. Settlements	NE	NE	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
6. Waste	**0.19**	**0.18**	**0.18**	**0.19**	**0.19**	**0.19**	**0.18**	**0.19**	**0.18**	**0.19**
A. Solid Waste Disposal on Land										
B. Waste-water Handling	0.19	0.18	0.18	0.19	0.19	0.19	0.18	0.19	0.18	0.19
C. Waste Incineration	NA,NO	NA,NO	0.00	NA,NO	NA,NO	NA,NO	0.00	0.00	0.00	0.00
D. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7. Other *(as specified in Summary 1.A)*	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Total N_2O emissions including N_2O from LULUCF	**4.25**	**4.34**	**4.39**	**4.38**	**4.49**	**4.41**	**4.46**	**4.32**	**4.13**	**4.16**
Total N_2O emissions excluding N_2O from LULUCF	**3.98**	**4.07**	**4.11**	**4.10**	**4.22**	**4.14**	**4.19**	**4.03**	**3.86**	**3.89**
Memo Items:										
International Bunkers	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Aviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	NA	NA	NA	NA	NA	NA	NA	NA	NA,NO	NA,NO
Multilateral Operations	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CO_2 Emissions from Biomass										

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
N_2O
(Part 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2006	2007	2008	2009	2010	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	%
1. Energy	**0.64**	**0.62**	**0.67**	**0.60**	**0.58**	**-0.40**
A. Fuel Combustion (Sectoral Approach)	0.64	0.62	0.67	0.60	0.58	-0.40
1. Energy Industries	0.09	0.09	0.09	0.09	0.09	3.62
2. Manufacturing Industries and Construction	0.12	0.09	0.10	0.08	0.06	-53.30
3. Transport	0.27	0.28	0.31	0.27	0.26	115.61
4. Other Sectors	0.16	0.16	0.17	0.16	0.17	-29.95
5. Other	NA	NA	0.00	0.00	0.00	100.00
B. Fugitive Emissions from Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
1. Solid Fuels	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
2. Oil and Natural Gas	NO	NO	NO	NO	NO	0.00
2. Industrial Processes	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**NA,NO**	**0.00**
A. Mineral Products	NA	NA	NA	NA	NA	0.00
B. Chemical Industry	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
C. Metal Production	NO	NO	NO	NO	NO	0.00
D. Other Production						
E. Production of Halocarbons and SF_6						
F. Consumption of Halocarbons and SF_6						
G. Other	NA	NA	NA	NA	NA	0.00
3. Solvent and Other Product Use	0.14	0.14	0.09	0.10	0.10	-62.91
4. Agriculture	**2.97**	**3.00**	**2.78**	**2.88**	**2.79**	**-18.97**
A. Enteric Fermentation						
B. Manure Management	0.51	0.53	0.49	0.49	0.45	-49.30
C. Rice Cultivation						
D. Agricultural Soils	2.46	2.47	2.29	2.39	2.34	-8.41
E. Prescribed Burning of Savannas	NO	NO	NO	NO	NO	0.00
F. Field Burning of Agricultural Residues	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
G. Other	NO	NO	NO	NO	NO	0.00
5. Land Use, Land-Use Change and Forestry	**0.28**	**0.27**	**0.27**	**0.27**	**0.27**	**0.21**
A. Forest Land	0.01	0.00	0.00	0.00	0.00	100.00
B. Cropland	0.27	0.27	0.27	0.27	0.27	0.00
C. Grassland	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
D. Wetlands	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	0.00
E. Settlements	NE,NO	NE,NO	NE,NO	NE,NO	NE,NO	0.00
F. Other Land	NO	NO	NO	NO	NO	0.00
G. Other	NE	NE	NE	NE	NE	0.00
6. Waste	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.42**
A. Solid Waste Disposal on Land						
B. Waste-water Handling	0.19	0.19	0.19	0.19	0.19	0.41
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	100.00
D. Other	NA	NA	NA	NA	NA	0.00

7. Other *(as specified in Summary 1.A)*	NA	NA	NA	NA	NA	0.00
Total N_2O emissions including N_2O from LULUCF	**4.22**	**4.23**	**4.00**	**4.04**	**3.94**	**-17.27**
Total N_2O emissions excluding N_2O from LULUCF	**3.94**	**3.95**	**3.73**	**3.77**	**3.66**	**-18.32**
Memo Items:						
International Bunkers	**0.04**	**0.06**	**0.09**	**0.04**	**0.03**	**820.02**
Aviation	0.00	0.00	0.00	0.00	0.00	-25.06
Marine	0.04	0.06	0.08	0.04	0.02	100.00
Multilateral Operations	NA	NA	0.00	0.00	0.00	100.00
CO_2 Emissions from Biomass						

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
HFCs, PFCs and SF_6
(Part 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1986) (Gg)	1987 (Gg)	1988 (Gg)	1989 (Gg)	1990 (Gg)	1991 (Gg)	1992 (Gg)	1993 (Gg)	1994 (Gg)	1995 (Gg)
Emissions of HFCs[3] - ($Gg\ CO_2$ equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	**31.76**
HFC-23	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-32	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-41	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-43-10mee	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-125	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-134	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-134a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.02
HFC-152a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-143	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-143a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-227ea	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-236fa	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-245ca	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Unspecified mix of listed HFCs[4] - ($Gg\ CO_2$ equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Emissions of PFCs[3] - ($Gg\ CO_2$ equivalent)	**276.29**	**317.87**	**219.63**	**249.83**	**257.44**	**302.58**	**106.75**	**105.87**	**105.30**	**106.48**
CF_4	0.04	0.04	0.03	0.03	0.03	0.04	0.01	0.01	0.01	0.01
C_2F_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_3F_8	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_4F_{10}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
$c\text{-}C_4F_8$	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_5F_{12}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_6F_{14}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Unspecified mix of listed PFCs[4] - ($Gg\ CO_2$ equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Emissions of SF6[3] - ($Gg\ CO_2$ equivalent)	**10.24**	**10.24**	**10.24**	**11.46**	**10.30**	**10.11**	**10.13**	**11.05**	**11.36**	**12.72**
SF_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
HFCs, PFCs and SF_6
(Part 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1996 (Gg)	1997 (Gg)	1998 (Gg)	1999 (Gg)	2000 (Gg)	2001 (Gg)	2002 (Gg)	2003 (Gg)	2004 (Gg)	2005 (Gg)
Emissions of HFCs[3] - (Gg CO_2 equivalent)	**30.02**	**35.03**	**31.47**	**27.37**	**35.72**	**45.69**	**59.44**	**82.71**	**100.56**	**119.90**
HFC-23	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-32	NA,NO	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-41	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-43-10mee	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-125	NA,NO	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-134	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-134a	0.02	0.03	0.02	0.02	0.02	0.03	0.04	0.05	0.06	0.07
HFC-152a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-143	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-143a	NA,NO	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-227ea	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-236fa	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
HFC-245ca	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Unspecified mix of listed HFCs[4] - (Gg CO_2 equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Emissions of PFCs[3] - (Gg CO_2 equivalent)	**101.75**	**104.87**	**102.03**	**105.35**	**105.61**	**105.61**	**116.44**	**118.99**	**120.01**	**132.73**
CF_4	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
C_2F_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_3F_8	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_4F_{10}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
c-C_4F_8	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_5F_{12}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
C_6F_{14}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Unspecified mix of listed PFCs[4] - (Gg CO_2 equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
Emissions of SF_6[3] - (Gg CO_2 equivalent)	**13.50**	**13.89**	**13.39**	**16.11**	**15.74**	**16.11**	**17.33**	**17.92**	**18.31**	**18.86**
SF_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS
HFCs, PFCs and SF_6
(Part 3 of 3)

Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2006	2007	2008	2009	2010	Change from base to latest reported year
	(Gg)	(Gg)	(Gg)	(Gg)	(Gg)	%
Emissions of HFCs[3] - (Gg CO_2 equivalent)	**135.63**	**151.07**	**153.77**	**165.31**	**168.79**	**100.00**
HFC-23	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-32	0.00	0.00	0.00	0.00	0.00	100.00
HFC-41	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-43-10mee	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-125	0.00	0.00	0.01	0.01	0.01	100.00
HFC-134	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-134a	0.08	0.09	0.09	0.10	0.10	100.00
HFC-152a	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-143	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-143a	0.00	0.00	0.00	0.01	0.01	100.00
HFC-227ea	0.00	0.00	0.00	0.00	0.00	100.00
HFC-236fa	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
HFC-245ca	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
Unspecified mix of listed HFCs[4] - (Gg CO_2 equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
Emissions of PFCs[3] - (Gg CO_2 equivalent)	**124.70**	**90.87**	**20.91**	**7.43**	**13.68**	**-95.05**
CF_4	0.02	0.01	0.00	0.00	0.00	-95.22
C_2F_6	0.00	0.00	0.00	0.00	0.00	-93.85
C_3F_8	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
C_4F_{10}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
c-C_4F_8	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
C_5F_{12}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
C_6F_{14}	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
Unspecified mix of listed PFCs[4] - (Gg CO_2 equivalent)	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00
Emissions of SF6[3] - (Gg CO_2 equivalent)	**18.26**	**17.54**	**16.68**	**15.92**	**16.54**	**61.53**
SF_6	0.00	0.00	0.00	0.00	0.00	61.53

Note: All footnotes for this table are given at the end of the table on sheet 5.

TABLE 10 EMISSION TRENDS SUMMARY (Part 1 of 3)

Inventor
Submission 201.
SLOVENIA

GREENHOUSE GAS EMISSIONS	Base year (1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)
CO_2 emissions including net CO_2 from LULUCF	8,615.01	8,071.00	7,819.79	7,762.16	7,458.98	6,488.23	6,371.69	6,703.09	6,843.38	7,696.42
CO_2 emissions excluding net CO_2 from LULUCF	16,304.88	15,751.29	15,473.04	15,414.39	14,754.17	13,767.70	13,690.04	14,055.35	14,190.52	15,014.52
CH_4 emissions including CH_4 from LULUCF	2,263.30	2,253.80	2,238.98	2,244.30	2,210.62	2,121.47	2,184.07	2,107.22	2,100.26	2,093.98
CH_4 emissions excluding CH_4 from LULUCF	2,263.30	2,253.80	2,236.76	2,242.79	2,202.64	2,113.16	2,179.70	2,107.22	2,100.26	2,091.78
N_2O emissions including N_2O from LULUCF	1,474.64	1,490.67	1,434.20	1,376.36	1,355.00	1,273.71	1,366.17	1,270.24	1,297.95	1,313.93
N_2O emissions excluding N_2O from LULUCF	1,390.76	1,406.79	1,349.92	1,292.21	1,269.69	1,188.33	1,281.50	1,186.36	1,214.08	1,229.66
HFCs	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	31.76
PFCs	276.29	317.87	219.63	249.83	257.44	302.58	106.75	105.87	105.30	106.48
SF_6	10.24	10.24	10.24	11.46	10.30	10.11	10.13	11.05	11.36	12.72
Total (including LULUCF)	**12,639.49**	**12,143.59**	**11,722.85**	**11,644.11**	**11,292.35**	**10,196.10**	**10,038.81**	**10,197.47**	**10,358.26**	**11,255.29**
Total (excluding LULUCF)	**20,245.48**	**19,740.00**	**19,289.59**	**19,210.68**	**18,494.24**	**17,381.88**	**17,268.13**	**17,465.85**	**17,621.52**	**18,486.92**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year (1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)
1. Energy	16,072.47	15,507.46	15,133.03	15,107.29	14,400.20	13,558.50	13,562.51	14,045.09	14,024.97	14,848.40
2. Industrial Processes	1,306.06	1,331.81	1,308.46	1,303.11	1,307.81	1,187.22	922.19	783.55	940.08	990.20
3. Solvent and Other Product Use	81.90	72.28	62.65	53.03	43.40	37.20	27.90	19.68	18.83	17.25
4. Agriculture	2,218.06	2,250.18	2,195.99	2,142.22	2,140.00	2,007.43	2,183.95	2,044.40	2,057.83	2,046.47
5. Land Use, Land-Use Change and Forestry[5]	-7,605.99	-7,596.41	-7,566.74	-7,566.57	-7,201.89	-7,185.78	-7,229.32	-7,268.38	-7,263.26	-7,231.63
6. Waste	566.99	578.27	589.46	605.04	602.83	591.53	571.58	573.13	579.81	584.60
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)[5]	**12,639.49**	**12,143.59**	**11,722.85**	**11,644.11**	**11,292.35**	**10,196.10**	**10,038.81**	**10,197.47**	**10,358.26**	**11,255.29**

[1] The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

[2] Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[3] Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO_2 equivalent emissions.

[4] In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO_2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

[5] Includes net CO_2, CH_4 and N_2O from LULUCF.

TABLE 10 EMISSION TRENDS SUMMARY (Part 2 of 3)

Inventory 2010
Submission 2012 v1.1
SLOVENIA

GREENHOUSE GAS EMISSIONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)
CO_2 emissions including net CO_2 from LULUCF	8,384.95	8,718.99	8,515.51	7,843.71	7,932.07	7,618.50	7,768.15	7,738.88	7,868.97	8,182.08
CO_2 emissions excluding net CO_2 from LULUCF	15,683.40	15,994.19	15,730.61	15,103.45	15,212.79	16,125.38	16,272.24	16,027.27	16,375.97	16,672.59
CH_4 emissions including CH_4 from LULUCF	2,057.05	2,081.19	2,123.19	2,094.56	2,189.56	2,154.29	2,241.64	2,232.17	2,156.22	2,167.71
CH_4 emissions excluding CH_4 from LULUCF	2,053.37	2,075.25	2,111.71	2,089.36	2,187.51	2,150.23	2,240.30	2,204.07	2,154.83	2,165.10
N_2O emissions including N_2O from LULUCF	1,317.80	1,345.83	1,360.75	1,356.69	1,391.54	1,366.99	1,383.22	1,339.41	1,281.74	1,290.84
N_2O emissions excluding N_2O from LULUCF	1,233.26	1,260.88	1,274.79	1,271.88	1,307.29	1,282.38	1,299.10	1,250.46	1,197.61	1,206.49
HFCs	30.02	35.03	31.47	27.37	35.72	45.69	59.44	82.71	100.56	119.90
PFCs	101.75	104.87	102.03	105.35	105.61	105.61	116.44	118.99	120.01	132.73
SF_6	13.50	13.89	13.39	16.11	15.74	16.11	17.33	17.92	18.31	18.86
Total (including LULUCF)	**11,905.06**	**12,299.80**	**12,146.33**	**11,443.79**	**11,670.25**	**11,307.19**	**11,586.23**	**11,530.07**	**11,545.80**	**11,912.13**
Total (excluding LULUCF)	**19,115.29**	**19,484.11**	**19,263.99**	**18,613.51**	**18,864.66**	**19,725.39**	**20,004.86**	**19,701.41**	**19,967.29**	**20,315.67**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)
1. Energy	15,520.99	15,828.23	15,546.63	14,867.26	14,954.50	15,773.71	15,956.54	15,667.25	15,987.13	16,205.27
2. Industrial Processes	987.20	1,016.40	1,001.69	1,019.37	1,047.32	1,116.02	1,129.75	1,206.17	1,248.23	1,347.99
3. Solvent and Other Product Use	18.70	18.95	27.96	32.40	42.73	36.37	36.53	33.33	39.25	43.32
4. Agriculture	1,998.48	2,001.39	2,049.22	2,031.84	2,137.30	2,109.28	2,179.01	2,085.31	1,991.53	2,006.50
5. Land Use, Land-Use Change and Forestry[5]	-7,210.22	-7,184.31	-7,117.66	-7,169.72	-7,194.41	-8,418.20	-8,418.63	-8,171.34	-8,421.49	-8,403.54
6. Waste	589.91	619.15	638.49	662.62	682.81	690.01	703.03	709.34	701.16	712.59
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)[5]	**11,905.06**	**12,299.80**	**12,146.33**	**11,443.79**	**11,670.25**	**11,307.19**	**11,586.23**	**11,530.07**	**11,545.80**	**11,912.13**

[1] The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

[2] Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[3] Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO_2 equivalent emissions.

[4] In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO_2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

[5] Includes net CO_2, CH_4 and N_2O from LULUCF.

TABLE 10 EMISSION TRENDS SUMMARY (Part 3 of 3)

GREENHOUSE GAS EMISSIONS	2006	2007	2008	2009	2010	Change from base to latest reported year
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	(%)
CO_2 emissions including net CO_2 from LULUCF	8,513.37	8,503.98	9,470.44	7,587.95	7,527.40	-12.62
CO_2 emissions excluding net CO_2 from LULUCF	16,862.44	16,993.01	17,962.88	16,065.18	16,103.35	-1.24
CH_4 emissions including CH_4 from LULUCF	2,207.12	2,195.02	2,076.08	2,045.56	2,036.72	-10.01
CH_4 emissions excluding CH_4 from LULUCF	2,187.96	2,193.14	2,075.19	2,043.37	2,035.72	-10.06
N_2O emissions including N_2O from LULUCF	1,308.45	1,309.78	1,240.15	1,252.08	1,220.02	-17.27
N_2O emissions excluding N_2O from LULUCF	1,221.12	1,225.56	1,156.11	1,167.81	1,135.96	-18.32
HFCs	135.63	151.07	153.77	165.31	168.79	100.00
PFCs	124.70	90.87	20.91	7.43	13.68	-95.05
SF_6	18.26	17.54	16.68	15.92	16.54	61.53
Total (including LULUCF)	**12,307.53**	**12,268.27**	**12,978.03**	**11,074.25**	**10,983.15**	**-13.10**
Total (excluding LULUCF)	**20,550.11**	**20,671.19**	**21,385.54**	**19,465.02**	**19,474.04**	**-3.81**

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2006	2007	2008	2009	2010	Change from base to latest reported year
	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	CO_2 equivalent (Gg)	(%)
1. Energy	16,350.67	16,449.28	17,492.31	15,923.65	15,972.47	-0.62
2. Industrial Processes	1,403.27	1,409.19	1,282.25	931.22	930.89	-28.72
3. Solvent and Other Product Use	44.15	42.16	27.59	31.00	30.38	-62.91
4. Agriculture	2,022.96	2,078.36	1,964.60	1,995.96	1,962.85	-11.51
5. Land Use, Land-Use Change and Forestry[5]	-8,242.58	-8,402.92	-8,407.51	-8,390.77	-8,490.89	11.63
6. Waste	729.06	692.20	618.79	583.18	577.46	1.85
7. Other	NA	NA	NA	NA	NA	0.00
Total (including LULUCF)[5]	**12,307.53**	**12,268.27**	**12,978.03**	**11,074.25**	**10,983.15**	**-13.10**

[1] The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the COP. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

[2] Fill in net emissions/removals as reported in table Summary 1.A. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[3] Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO_2 equivalent emissions.

[4] In accordance with the UNFCCC reporting guidelines, HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is Gg of CO_2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.

[5] Includes net CO_2, CH_4 and N_2O from LULUCF.

Documentation box:

• Parties should provide detailed explanations on emissions trends in Chapter 2: Trends in Greenhouse Gas Emissions and, as appropriate, in the corresponding Chapters 3 - 9 of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of this table.

• Use the documentation box to provide explanations if potential emissions are reported.