

Project 001

Sources of Farm Pollution and Impact on River Quality

Map Annex to Project Record 001/13/W

WRc plc

Project Record 001/13/W



NRA

National Rivers Authority

Sources of farm pollution and impact on river quality

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Further copies of this document may be obtained from Regional R&D Co-ordinators or the R&D Section of NRA Head Office.

Statement of use

This document is intended as a comprehensive record of the field investigations and literature reviews undertaken within the project. It is intended for circulation to members of the NRA's Rural Land Use Group only.

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EXPLANATORY NOTES

This map annex forms part of the final output of NRA R & D Project 001 on the sources and impacts of farm pollution. It is intended for use in conjunction with the associated Project Record (001/13/W).

Full details of the derivation of the maps in this annex can be found in the Project Record. By way of summary, all maps are outputs from an ARC/INFO GIS-linked database of farm pollution risk, developed under the project. This is an interactive system that can be interrogated for information on a range of factors relating to pollution risk. The catchment framework shown in Map 1 was digitised from hydrometric maps supplied by NRA Regions and, where these were not available, quinquennial river quality maps. All catchments have been codified and linked to catchment names (see Table 1). Livestock and land use data were obtained from the 1988 Agricultural Censuses of England and Wales, Scotland and Northern Ireland. Pollution incident data were derived from NRA regional archives; data for 1988 (a wet year) and 1989 (a dry year) were collated and incorporated into the pollution risk database, but only 1988 data are displayed in this map annex. Table 2 gives details of the pollution incident types and severity codings used.

Owing to difficulties in obtaining pollution incident data, the maps shown in this annex do not have a full geographical coverage. Data is either absent or limited in the following NRA regions:

NRA Severn-Trent Region	No data
NRA Southern Region	No data
NRA Anglian Region	No mapped data, but catchment totals for one district
NRA Wessex Region	Only incidents that were considered for prosecution (ie a small proportion)
NRA Northumbrian Region	1989 data only

Table 1 List of catchments and map codes.

(Catchment codes relate to the codes in Map 1)

CATCHMENT CODE	CATCHMENT NAME
NRA Anglian Region	
7A	NORTH WELLAND
7B_C	SOUTH WELLAND & SOUTH HOLLAND EMBANKMENT
7D_E	DEEPING FEN, SPALDING & PINCHBECK
7E_V	BEDFORD LEVELS & DRAINAGE AREA BETWEEN L NENE & L WELLAND7K WINGLAND
7P_Q	HUNDRED OF WISBECH & WALDERSE
7Y	NENE WASHLANDS
729_1	U ANCHOLME
729_2	RASE
729_3	L ANCHOLME A
729_4	L ANCHOLME B
729_5	L ANCHOLME C
729_6	WINTERTON BECK
729_7	WEST DRAIN
729_8	LAND DRAIN
729_9	TIDAL HUMBER, SOUTH BANK
729_10	LACEBY BECK
729_11	LOUTH CANAL
729_12	NORTH EAST DRAINAGE AREA
729_13	SALTFLEET DRAINAGE AREA
729_14	GREAT EAU
729_15	WOLD GRIFT DRAINAGE AREA
729_16	WILLOUGHBY DRAINAGE AREA
730_1	U WITHAM A
730_2	U WITHAM B
730_3	U WITHAM C
730_4	BRANT
730_5	LINCOLN DRAINAGE AREA
730_6	TILL
730_7	BARLINGS EAU
730_8	L WITHAM A
730_9	L WITHAM B
730_10	BAIN
730_11	SLEA
730_12	SOUTH FORTY FOOT DRAINAGE AREA
730_13	HOBHOLE DRAINAGE AREA
730_14	LYMN & STEEPING
731_1	UNNAMED TRIB
731_2	UNNAMED TRIB
731_3	UNNAMED TRIB
731_4	UNNAMED TRIB
731_5	UNNAMED TRIB
731_6	U WELLAND
731_7	UNNAMED TRIB

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
731_8	CHATER
731_9	M WELLAND
731_10	GWASH & RUTLAND WATER
731_11	U GLEN
731_12	UNNAMED TRIB
731_13	MAXEY CUT
732_1	WILTON NENE
732_2	U NENE
732_3	BRAMPTON NENE
732_4	UNNAMED TRIB
732_5	M NENE A
732_6	ISE
732_7	HARPERS BROOK
732_8	WILLOW BROOK
732_9	M NENE B
732_10	L NENE A
732_11	L NENE B
733_1	U GREAT OUSE A
733_2	PADBURY BROOK
733_3	U GREAT OUSE B
733_4	TORE
733_5	U GREAT OUSE C
733_6	U OUZEL
733_7	CLAPSTONE BROOK
733_8_10	L OUZEL
733_9	BROUGHTON BROOK
733_11	M GREAT OUSE A
733_12	M GREAT OUSE B (INC ELSTOW BROOK)
733_13	HIZ
733_14	U IVEL & PIX BROOK
733_15	L IVEL
733_16	FLIT-IVEL NAVIGATION
733_17	CAMPTON BROOK
733_20	M GREAT OUSE C
733_21	KYM
733_22	L GREAT OUSE A
733_23	ALCONBERRY BROOK
733_24_25	ELLINGTON BROOK
733_26	NEW BEDFORD
733_27_29	U CAM
733_28	BABRAHAM
733_30	RHEE
733_31_33	M CAM
733_32	BOURN BROOK
733_34	L CAM EAST BANK
733_35	OLD WEST & L CAM WEST BANK
733_36	OUSE & SOHAM BROOK
733_37	U LARK
733_38	U KENNETT

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
811b	L DERWENT (CUMBRIA)
812	L DOUGLAS
813	DUDDON
814	EAMONT
815a	U EDEN
815b	M EDEN a
815c	M EDEN b
815d	L EDEN
816	EHEN
817	ELLEN
818	ESK (CUMBRIA)
819	GRETA
820a	U HODDER
820b	L HODDER
822	IRT
823	IRTHING
824	KEER
825	KENT
828a	U LEVEN
828b	L LEVEN
829	LOSTOCK
830	LOWTHER
831a	U LUNE
831b	M LUNE
831c	L LUNE
832	MARROW
833	MITE
834	PETTERILL
835	RAWTHEY
836a	U RIBBLE
836b	M RIBBLE
836c	L RIBBLE
837	TIDAL RIBBLE
839a	WAMPOOL
839b	WAVER
840	WENNING
841	WINSTER
842a	U WYRE
842b	BROCK
842c	M WYRE
842d	L WYRE
843	YARROW
844	ALT
846	BEAL
847	BIRKET & FENDER
848	BOLLIN
850	CROAL
851	CROSSENS
852	DANE

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
853	DEAN
854	DIBBINSDALE BROOK
855	DITTON BROOK
856	U DOUGLAS
857	ETHEROW
858	GLAZE
859	GOWY
860	GOYT
862	IRK
863	IRWELL
868	MEDLOCK
869	MERSEY
870	TIDAL MERSEY
871	MICKER BROOK
873	RIVACRE BROOK
874	ROCH
876	SANKEY BROOK
878	SETT
880	SINDERLAND BROOK
881	SPODDEN
882	TAME
884a	U WEAVER
884b	L WEAVER
885	WHEELLOCK
886	WORSLEY BROOK
887	WINCHAM BROOK

NRA Northumbrian Region

1021_0A	U TILL
1021_0B	L TILL
1021_0C	NORTH & SOUTH LOW
1022_1	LONG NANNY & ADJ COA STR
1022_2A	U ALN
1022_2B	L ALN
1022_3A	U COQUET
1022_3B	L COQUET
1022_4	LYNE
1022_5A	U WANSBECK
1022_5B	FONT
1022_5C	L WANSBECK
1022_6A	U BLYTH
1022_6B	L BLYTH

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
733_39	L LARK
733_40	L LITTLE OUSE B
733_41	SAPISTON
733_42	U LITTLE OUSE
733_43	M LITTLE OUSE A
733_44	THET
733_45	M LITTLE OUSE B
733_46	L LITTLE OUSE A
733_47_51	L OUSE
733_48	U WISSEY
733_49	STRINGSIDE
733_50	L WISSEY SOUTH BANK
733_52	OLD BEDFORD
733_53	TWENTY FOOT RIVER & SIXTEEN FOOT DRAIN
733_54	MIDDLE LEVEL MAIN DRAIN & TIDAL GREAT OUSE WEST BANK A
733_55	TIDAL GREAT OUSE WEST BANK B
733_56A	TIDAL GREAT OUSE EAST BANK
733_56B	UNNAMED TRIB
733_56C	UNNAMED TRIB
733_58	NAR
733_59	MIDDLETON STOP DRAIN
733_61	GAYWOOD
733_64	BABINGLEY
733_65	THE INGOL
733_66	HEACHAM
734_1	TIDAL BURN & ADJ COA STR
734_2	BURN
734_3	STIFFKEY
734_4	GLAVEN
734_5	COA STR AROUND CROMER
734_6	U BURE
734_7	UNNAMED TRIB
734_8	U ANT
734_9	M BURE & L ANT
734_10	L BURE & ADJ BROADS
734_11	WENSUM
734_12	TUD
734_13	U YARE & TIFFEY
734_14	TAS
734_15	L YARE
734_16	U WAVENEY
734_17	DOVE & CHICKERING BECK
734_18	M WAVENEY
734_19	L WAVENEY
735_1	UNNAMED TRIB
735_2	BLYTH & WALPOLE
735_3	UNNAMED TRIB
735_4	U ALDE & ORE
735_5	L ALDE & BUTLEY

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
735_6	DEBEN
735_7	UNNAMED TRIB
735_8	GIPPING
735_9	UNNAMED TRIB
735_10	TIDAL DEBEN & TIDAL ORWELL
736_11	U STOUR
736_12	GLEM
736_13	CHAD BROOK
736_14	BELCHAMP BROOK
736_15	M STOUR
736_16	BOX
736_17	BRETT
736_18	L STOUR
736_19	STOUR ESTUARY
737_21	U COLNE
737_22	BOURNE BROOK
737_23	L COLNE
737_24	ROMAN & LAYER BROOK
737_25	TIDAL COLNE
737_26	UNNAMED TRIB
737_31	PANT & U BLACKWATER
737_32	PODS BROOK & BRAIN
737_33	WID
737_34	CAN & ROXWELL BROOK
737_35	U CHELMER
737_36	L CHELMER
737_37	SANDON BROOK
737_38	TER
737_39	BLACKWATER ESTUARY
737_41	U CROUCH
737_42	L CROUCH
737_43	CROUCH ESTUARY NORTH BANK
737_44	ROACH & NORTH BANKS OF CROUCH & OUTER THAMES ESTUARIES
737_56	MAR DYKE & INNER THAMES ESTUARY NORTH BANK

NRA North West Region

81	ANNAS
82	BELA
83a	BORDER ESK
83b	WHITE LYNE & BLACK LYNE
84	CALDER (LANCS)
85	CALDER (CUMBRIA)
86	CALDEW
87	COCKER
88	CONDER
89	CRAKE
810	DARWEN
811a	U DERWENT (CUMBRIA)

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
1023_1A	U NORTH TYNE
1023_1B	REDE
1023_1C	L NORTH TYNE
1023_2A	U SOUTH TYNE
1023_2B	EAST & WEST ALLEN
1023_2C	L SOUTH TYNE
1023_3A	U M TYNE
1023_3B	L M TYNE
1023_4A	U DERWENT
1023_4B	L DERWENT
1023_5	L TYNE
1024_1A	U WEAR
1024_1B	U M WEAR
1024_2	GAUNLESS
1024_3	L M WEAR
1024_4	BROWNEY
1024_5	L WEAR
1025_1	U TEES
1025_2	M TEES
1025_3	SKERNE
1025_4A	LEVEN
1025_4B	L TEES
1025_5	CASTLE EDEN BURN & ADJ COA STR
1025_6	SKELTON & KILTON BECKS

NRA Severn Trent Region

61	SEVERN HEADWATERS
62	U SEVERN a
63	RHIW
64	BANWY
65	U VYRNWY
66	L VYRNWY
67	TANAT
68	MORDE
69	PERRY
610	U SEVERN b
611	CAMLAD
612	REA BROOK
613	CLUN
614	U TEME
615	ONNY
616a	U M SEVERN A
616b	U M SEVERN B
617	RODEN
618	U TERNE
619	L TERNE
620	MEASE
621	WORFE

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
622	CORVE
623	M TEME
624	REA
625A	L M SEVERN A
625B	L M SEVERN B
626	STOUR
627	L TEME
628	SALWARPE
629	LEADON
630A	L SEVERN A
630B	L SEVERN B
631	BOW BROOK
632	ARROW
633	ALNE
634	SOWE
635	AVON HEADWATERS
636	U AVON
637	LEAM AND STOWE
638A	M AVON A
638B	M AVON B
639	DANE
640	STOUR
641A	L AVON
641B	BADSEY BROOK
642	ISBOURNE
644	FROME
645	TIDAL SEVERN
646	SOW
647	PENK
648	U TRENT
649	BLITHE
650	CHURNET
651	TEAN
652A	UNNAMED
652B	L DOVE
653A	U M TRENT A
653B	U M TRENT B
653C	U M TRENT C
654A	U TAME
654B	UNNAMED TRIB
655	BOURNE BROOK
656A	M TAME
656B	L TAME
656C	UNNAMED TRIB
657	COLE
658	BLYTHE
659A	U ANKER
659B	L ANKER
660	SENCE (ANKER)

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
661	U SOAR
662	SENCE (SOAR)
663A	M SOAR A
663B	M SOAR B
664	ROTHLEY BROOK
665	MEASE
666	L M TRENT A
666	L M TRENT A
667A	L SOAR
667A	L SOAR
667B	UNNAMED TRIB
668	WREAKE
669	EYE
670A	UNNAMED TRIB
670B	SMITE
670C	DEVON
671A	UNNAMED TRIB
671B	L M TRENT A
672	HILTON BROOK
673A	UNNAMED TRIB
673B	MANIFOLD
674	U DOVE
675	M DOVE
676A	UNNAMED TRIB
676B	UNNAMED TRIB
676C	L DERWENT
677A	M DERWENT A
677B	ECCLESBOURNE
677C	M DERWENT B
678	WYE (DERWENT)
679	DERWENT RESERVOIRS
680	U DERWENT
681	AMBER
682	EREWASH
683	LEEN
684A	U MAUN
684B	L MAUN
685	MEDEN
686	POULTER
687	L TRENT A
688A	U RYTON
688B	UNNAMED TRIB
688C	L RYTON
689A	L IDLE
689B	U IDLE
690	TORNE
691A	L TRENT B
691B	L TRENT C
692	EAU

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
NRA South West Region	
11a	LIM
12a	TIDAL AXE
12b	L AXE
12c	U AXE
12d	YARTY
13a	SID
14a	TIDAL OTTER
14b	OTTER
15a	TIDAL EXE
15b	CLYST
15c	CULM
15d	L EXE
15e	M EXE
15f	BATHERM
15g	U EXE
15h	BARLE
15j	CREEDY
15k	YEO
16a	TIDAL TEIGN
16b	L TEIGN
16c	U TEIGN
16d	BOVEY
17a	TIDAL DART
17b	DART
18a	TIDAL AVON & KINGSBRIDGE ESTUARY
18b	AVON
19a	TIDAL ERME
19b	ERME
19c	YEALM
110a	TIDAL YEALM
110a	TIDAL YEALM
111a	TIDAL PLYM
111b	PLYM & MEAVY
112a	TIDAL LYNHER
112b	TIDAL TAMAR & TAVY
112c	TAVY
112d	WALKHAM
112e	L TAMAR
112f	LYD
112g	THRUSHEL
112h	CAREY
112j	M TAMAR
112k	CLAW & DEER
112l	U TAMAR
112m	OTTERY
112n	KENSEY
112o	LYNHER

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
112p	INNY
112r	TIDDY
113a	SEATON
114a	TIDAL WEST LOOE & EAST LOOE
114b	EAST LOOE
114c	WEST LOOE
115a	TIDAL FOWEY
115b	FOWEY
116a	PAR
117a	CRINNIS STREAM
118a	ST AUSTELL
119a	HELFORD & L FAL ESTUARY
119b	TIDAL FAL & TRESILLIAN
119c	FAL
119d	TRESILLIAN & ALLEN
119e	CARNON AND KENNAL VALE
120a	COBER
121a	SOUTH COAST STREAMS - LOE BAR TO NORTHERN POINT
122a	LANDS END AND ST IVES STREAMS
122b	HAYLE
123a	RED & NORTH COAST STREAMS TO KELSEY HEAD
124a	GANNEL
125a	CAMEL ESTUARY, MENALHYL & PORTH STREAM
125b	CAMEL
125c	DE LANK
126a	NORTH COAST STREAMS, BOUNDS CLIFF TO HIGHER LONGBEAK
127a	STRAT AND NEET
128a	HARTLAND & CLOVELLY
129a	TIDAL TORRIDGE
129b	L TORRIDGE
129c	U TORRIDGE
129d	OKEMENT
130a	TIDAL TAW
130b	L TAW
130c	U TAW
130d	YEO (U TAW) & DALCH
130e	LITTLE DART
130f	MOLE
130g	BRAY
130h	YEO (L TAW)
131a	NORTH DEVON COASTAL STREAMS
132a	LYN

NRA Southern Region

31	LYMINGTON AND AVON WATER
32	ISLE OF WIGHT
33	BEAULIEU & ADJ COA STR
34	L TEST & BLACKWATER

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
35	TIDAL TEST
36	M TEST
37	U TEST
38	ITCHEN
39	HAMBLE
310	MEON
311	WELLINGTON, HERMITAGE STREAM & ADJ COA STR
312	COA STR, REMO TO PAGHAM RIFE
313	U ROTHER
314	LOD
315	KIRD
316	LOXWOOD STR
317	TIDAL ARUN & ALDINGBOURNE RIFE
318	M ARUN
319	U ARUN
320	ADUR WEST
321	TIDAL ADUR
322	ADUR EAST
323	U OUSE
324	M OUSE
325	TIDAL OUSE
326	GLYNDE REACH
327	UCK
328	TIDAL CUCKMERE
329	U CUCKMERE
330	PEVENSEY HAVEN
331	WALLERS HAVEN
332	COMBE HAVEN
333	EDEN
334	U MEDWAY
335	M MEDWAY
336	U ROTHER (KENT)
337	TEISE
338	M ROTHER
339	BREDE
340	L ROTHER
341	BEULT
342	L MEDWAY
343	THAMES ESTUARY COA STR
344	ISLE OF SHEPPEY
345	THE SWALE (SOUTH BANK)
346	U GREAT STOUR
347	M GREAT STOUR
348	WELLAND MARSH
349	DOUR & ADJ COA STR
350	L GREAT STOUR

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
NRA Thames Region	
41	UPPER THAMES a
41a	KEY
42	CHURN
43	RAY (WILTS)
44	AMPNEY BROOK
45	UPPER THAMES b
46	COLN
47	COLE
48	LEACH
49	UPPER THAMES c
410a	U WINDRUSH
410b	L WINDRUSH
411	UPPER THAMES d
412a	U EVENLODE
412b	L EVENLODE
413	UPPER THAMES e
414a	U CHERWELL
414b	M CHERWELL
414c	L CHERWELL
414d	RAY (OXON)
415	UPPER THAMES f
416	UPPER THAMES g
417	OCK
418	UPPER THAMES h
418a	GINGE BROOK
418b	MOOR DITCH
419a	U THAME
419b	L THAME
420	MIDDLE THAMES a
421	PANG AND SULHAM
422	KENNET
422a	FOUDRY BROOK
422b	ENBOURNE
422c	LAMBOURNE
423	MIDDLE THAMES b
424	LODDON
424a	WHITEWATER
424b	BLACKWATER
425	WYE
426	THE CUT
427	MIDDLE THAMES c
428a	U COLNE
428b	BULBOURNE
428c	L COLNE
429	CHERTSEY BOURNE
430a	U WEY
430b	L WEY

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
430c	BOURNE
430d	CRANLEIGH WATERS
431	MIDDLE THAMES d
432a	U MOLE
432b	L MOLE
433	HOGSMILL
434	TIDAL THAMES
436	CRANE
438	BRENT
440	BEVERLEY
441	WANDLE
443	RAVENSBOURNE
446	U LEE
447	MIMRAM
448	BEANE
449	RIB
450	ASH
451	STORT
452	M LEE a
453a	M LEE b
453b	L LEE
454a	U RODING
454c	U RODING
455	INGREBOURNE
455a	BEAM
456	DARENT

NRA Welsh Region

51	MILFORD HAVEN NORTH BANK
52	COA STR AROUND ST DAVIDS HEAD & STRUMBLE HEAD
53	WESTERN CLEDDAU
54	NYFER & GWAUN
55	EASTERN CLEDDAU
56	MILFORD HAVEN SOUTH BANK
57	TAF
58	CYNIN & CYWYN
59	GWILI
510	L TYWI
511	GWENDRAETH FAWR & GWENDRAETH FACH
512	COTHI
513	U TYWI
514	BARGOD & GWYDDERIG
515	M TYWI
516	L TEIFI
517	M TEIFI
518	U TEIFI
519	COA STR AROUND CARDIGAN BAY
520	AERON

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
521	ARTH & WYRE
522	YSTWYTH
523	RHEIDOL
524	GOWER PENINSULA
525	LOUGHOR
526	TAWE
527	NEATH
528	AFAN
529	KENFIG
530	OGMORE
531	KENSON & CADOXTON
532	RHONDDA
533	ELY
534	CYNON
535	U TAFF
536	RHYMNEY
537	L TAFF
538	M USK
539	EBBW
540	LWYD
541	L USK
542	U USK
543	TROTHY
544	L WYE
545	FROME
546	L LUGG
547	L M WYE
548	ARROW
549	U LUGG
550	U M WYE
551	IRFON
552	ITHON
553	MONNOW
554	WYE HEADWATERS
555	L DOVEY
556	DYSYNNI
557	U DOVEY
558	WNION
559	L MAWDDACH
560	CWMNANTCOL
561	U MAWDDACH
562	U DEE
563	ALWEN
564	U M DEE
565	CEIRIOG
566	ALYN
567	CLYWEDOG
568	NORTHERSBURY BROOK
569	L M DEE

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
570	DEE ESTUARY
571	U CLWYD
572	L CLWYD
573	ELWY
574	DULAS & ADJ COA STR
575	L CONWY
576	U CONWY
577	DWYRYD
577	DWYRYD
578	GLASLYN
579	DWYFOR
580	ERCH, WEN & ADJ COA STR
581	SOCH & ADJ COA STR
582	LLYFNI & ADJ COA STR
583	GWYRFAI & SEIONT
584	OGWEN
585	BRAINT
586	CEINT & FFRAIW
587	COA STR SOUTH WEST ANGLESEA
588	ALAW
588	ALAW
589	COA STR NORTH ANGLESEA
590	HOLY ISLAND
591	COA STR EAST ANGLESEA

NRA Wessex Region

24310_4401	MUDE & HIGHCLIFFE
24321a	U AVON a (HAMPSHIRE)
24321b	U AVON b (HAMPSHIRE)
24322	NADDER
24323	WYLYE
24324	BOURNE
24325	EBBLE
24326	MIDDLE AVON (HAMPSHIRE)
24327	ASHFORD WATER & ALLEN RIVER
24328	LOWER AVON (HAMPSHIRE)
24331	UPPER STOUR
24332	CALE
24333	LYDDEN
24334a	M STOUR a
24334b	M STOUR b
24335	ALLEN
24336	MOORS
24337	STOUR
24402	POOLE BAY
24403	WEYMOUTH BAY
24404	CHESIL BEACH

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
24405	LYME BAY
24441	UPPER PIDDL
24442	DEVIL'S BROOK
24443	MIDDLE PIDDL
24444	BERE STREAM
24445	LOWER PIDDL
24451	CATTISTOCK
24452	HOOKE STREAM
24453	UPPER FROME
24454	SYDLING WATER
24455	CERNE & FROME
24456	S WINTERBOURNE
24457	MIDDLE FROME
24458	TADNOLL BROOK
24459	LOWER FROME
24460	WEY
24470	BRIDE
24481	BRIT
24482	SIMENE
24483	ASKER
24490	POOLE HARBOUR
25101	FORELAND POINT & GORE POINT
25102	HAWKCOMBE STREAM
25103	HORNER WATER & ALLER STREAM
25105	AVILL
25107	PILL RIVER
25108	WASHFORD STREAM
25109	DONIFORD STREAM
25110	KILVE STREAM
25201	ISLE
25202a	U YEO
25202b	L YEO
25203	UPPER PARRETT
25204	WEST SEDGEMOOR
25205a	U TONE
25205b	L TONE
25206	PARRETT ESTUARY (RIGHT BANK)
25207	PARRETT ESTUARY (LEFT BANK)
25208	CARY & KING'S SEDGEMOOR DRAIN
25209	UPPER BRUE
25210	HARTLAKE & SHEPPEY
25211	LOWER BRUE
25212	AXE
25213	OLDBRIDGE & BANWELL
25214	CONGRESBURY YEO
25215	KENN & LAND YEO
25216	PORTBURY DITCH
25301a	U BRISTOL AVON

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
25301b	U M BRISTOL AVON
25301c	L M BRISTOL AVON
25301d	L BRISTOL AVON
25302	FROME (BRISTOL)
25303	BOYD
25304	BY BROOK
25305	LUCKINGTON BROOK & AVON (SHERSTON)
25306	TETBURY AVON (BRISTOL)
25307	BRINKWORTH BROOK
25308	MARDEN
25309	SENINGTON BROOK
25310	BISS
25311	FROME (SOMERSET)
25312	MELLS RIVER
25313	CAM BROOK
25314	CHEW
25420	SEVERN
25423	LITTLE AVON

NRA Yorkshire Region

91	DOE LEA
92	U ROTHER
93	L ROTHER
94	SHEAF
95a	U DON
95b	M DON a
96	M DON b
97	M DON c
98a	U DEARNE
98b	L DEARNE
99	L DON
910	HOLME
911	COLNE
912a	U CALDER
912b	M CALDER

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
913	L CALDER
914	WORTH
915	U AIRE
916	M AIRE a
917	M AIRE b
918	L AIRE
919a	U WHARFE
919b	M WHARFE a
919c	M WHARFE b
920a	WASHBURN
920b	L WHARFE a
920c	L WHARFE b
921a	U NIDD
921b	M NIDD
921c	L NIDD
922a	U URE
922b	M URE
922c	L URE
923a	U SWALE
923b	M SWALE
923c	WISKE
923d	L SWALE
924a	U OUSE
924b	FOSS
924c	M OUSE
924d	L OUSE
925a	U RYE
925b	M RYE NORTH BANK INC WALMOUTH BECK
925c	COSTA BECK & SEVEN
925d	M & L RYE SOUTH BANK INC HOLBECK
926	DERWENT HEADWATERS
927a	U DERWENT
927b	M DERWENT a
928a	M DERWENT b INC SPITTLE BECK
928b	THE BECK
928c	L DERWENT
929a	U ESK
929b	L ESK
930a	GYPSEY RACE
930b	STREAM DIKE
931	U HULL
932	L HULL
933	COA STR AROUND SPURN HEAD
934	FOULNESS & MIRES BECK

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
Clyde RPB	
1111	STINCHER
1112	WATER OF GIRVAN
1113	DOON
1114	AYR
1115	U CLYDE
1116	M CLYDE
1117	AVON WATER
1118	IRVINE, ANNICK WATER & ?
1119	COA STR EAST OF GLASGOW
1120	CALDER
1121	L CLYDE
1122	LOCH LOMOND
1123	RUE, CUR, LOCH ECK & ADJ COA STR
1124	ARAY, SHIRA & FYNE
1125	KINTYRE & KNAPDALE
1126	ADD & CANAL
1127	LOCH AWE
1128	LOCH SCAMMADALE, LOCH FEOCHAN & ADJ COA STR
1129	LOCH TALLA
1130	UNNAMED
Forth RPB	
1139	TYNE
1140	ESK
1141	AVON, CANAL & WATER OF LEITH
1142	CARRON
1143	ALLAN WATER
1144	FORTH
1145	TEITH
1146	DEVON
1147	ORE & LEVEN
1148	COA STR A NORTH OF FIRTH OF FORTH
1149	COA STR B NORTH OF FIRTH OF FORTH
Highland RPB	
1185	DORBACK BURN
1186	LOCH FINDHORN
1187	NAIRN
1188	U FINDHORN
1189	LOCH NESS
1190	SPEAN (LOCH LAGGAN, LOCH TREIG)
1191	LEVEN
1192	NORTH WEST COA STR
1193	LOCH SHIEL
1194	LOCH MORER & ADJ COA STR

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
1195	LOCH LOCHY
1196	LOCH ARKAIG
1197	LOCH QUOICH & LOCH GARRY
1198	LING, GLENMORE & ADJ COA STR
1199	MORISTON
11100	BEAULY & GLAES
11101	CARRON & ADJ COA STR
11102	LOCH MARIE
11103	CONON
11104	BLACK ISLE
11105	AVERON, GLASS & ADJ COA STR
11106	GRUINARD, DUNDONNELL & ADJ COA STR
11107	BROOM, ULLAPOOL & ADJ COA STR
11108	CARRON
11109	KYLE (OYKEL, CASSLEY)
11110	FLEET & EVELIX
11111	INVER, KIRKAIG & ADJ COA STR
11112	SHIN
11113	BRORA
11114	DIONARD, LAXFORD, KEANAIG & ADJ COA STR
11115	STRATHMORE
11116	BORGIE & STRATH BEAG
11117	NAVER
11118	HELMSDALE
11119	STRATHY
11120	HALLADALE & FORSS WATER
11121	THURSC
11122	BERRIEDALE WATER, DUNBEATH WATER & ADJ COA STR
11123	WICK
11124	GILL BURN & ADJ COA STR

North East RPB

1165	COWLE WATER & ADJ COA STR
1166	DYE & WATER OF FEUGH
1167	M DEE
1168	U DEE
1169	U SPEY
1170	M SPEY
1171	DULNEIN
1172	AVON
1173	U DON
1174	M DON
1175	L DEE
1176	L DON
1177	URIE
1178	L SPEY
1179	DEVERON
1180	NORTH EAST COA STR A

Table 1 cont.

CATCHMENT CODE	CATCHMENT NAME
-------------------	----------------

1181	YTHAN
1182	UGIE
1183	NORTH EAST COA STR B...
1184	LOSSIE

Solway RPB

111	WATER OF LUCE & ADJ COA STR
112	BLADNOCH
113	CREE
114	WATER OF FLEET & DEE
115	WATER OF KEN
116	URR WATER & ADJ COA STR
117	U NITH
118	L NITH & CAIRN WATER
119	ANNAN
1110	ESK, LIDDEL WATER & ADJ COA STR

Tay RPB

1150	EARN
1151	LOCH TAY
1152	LYON
1153	U TUMMEL (LOCHS ERICHT, LAIDON & RANNOCH)
1154	GARRY & TILT
1155	M TAY AND L TUMMEL
1156	BRAAN
1157	ALMOND
1158	ARDLE AND BLACK WATER
1159	DEAN WATER & ISLA
1160	L TAY
1161	COA STR NORTH OF TAY ESTUARY
1162	SOUTH ESK
1163	NORTH ESK & WEST WATER
1164	EAEN

Tweed RPB

1131	TEVIOT
1132	ETTRICK & YARROW WATERS
1133	U TWEED
1134	GALA WATER
1135	LEADER WATER
1136	BLACKADDER AND WHITEADDER WATERS
1137	EYE WATER
1138	L TWEED

Table 2 Pollution incident type and severity codes

a) Incident types

STUDY CODE	FWR CODE*	DESCRIPTION
01	1(a)	CATTLE - Slurry stores/waste collection tanks
02	(b)	CATTLE - Solids stores
03	(c)	CATTLE - Yard washings
04	(d)	CATTLE - Dairy/parlour washings
05	(e)	CATTLE - Land run-off
06	(f)	CATTLE - Treatment system failure
07	(g)	CATTLE - Silage
08	2(a)	PIGS - Slurry stores
09	(b)	PIGS - Yard washings
10	(c)	PIGS - Land run-off
11	(d)	PIGS - Treatment system failure
12	3	Poultry
13	4	Sheep
14		Other
15	5 or 10	Where it is unclear whether the incident was due to cattle or pig slurry.
16	1 or 8	Where it is unclear whether the incident was due to a cattle or pig slurry store.

* FWR = annual farm waste report produced by NRA; now discontinued.

b) Incident severity

Incidents have been graded as either 'serious' or 'minor' in this map annex. A 'serious' incident is defined as either:

a) a 'major' or 'significant' incident under the national categorisation of incidents;

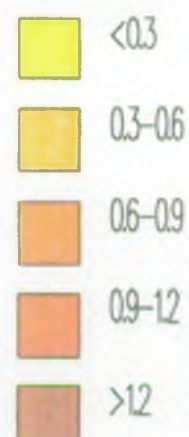
or

b) a 'serious' incident under the FWR grading system.

All other incidents have been categorised as minor. For further details of criteria governing severity grading, see Appendix C in the associated Project Record.

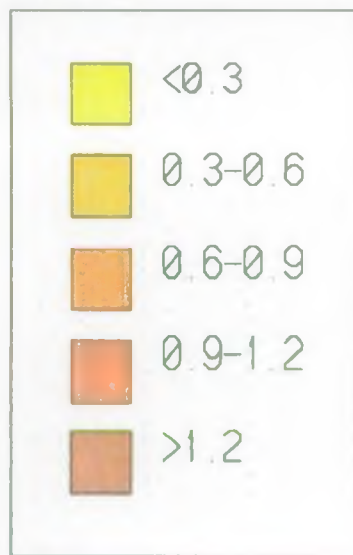
Dairy Cattle : density By River Catchment

Head/Ha Catchment



Beef Cattle : density By River Catchment

Head/Ha catchment



000 000

0

100km

Pigs : density
By River Catchment

Head/Ha agric. land



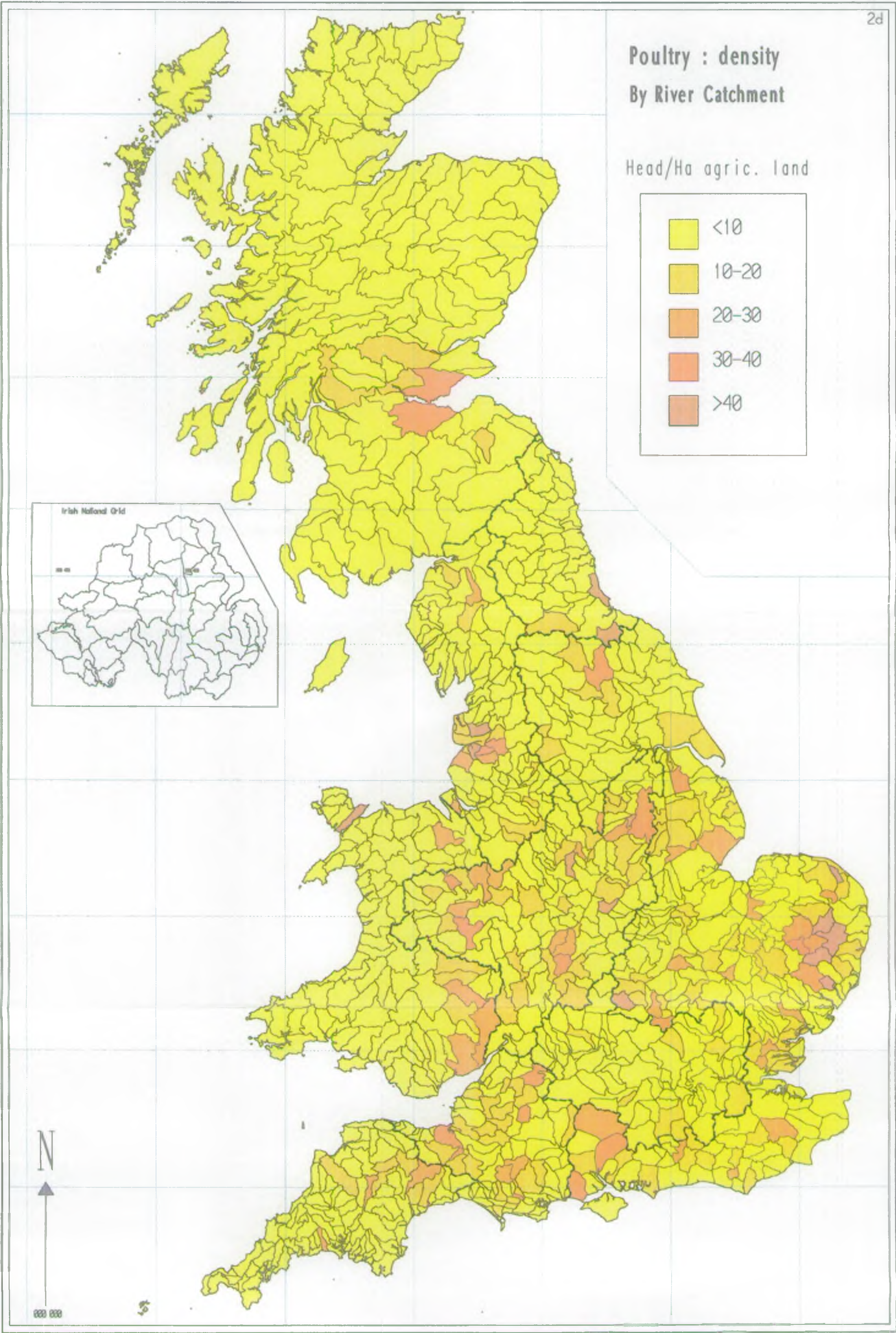
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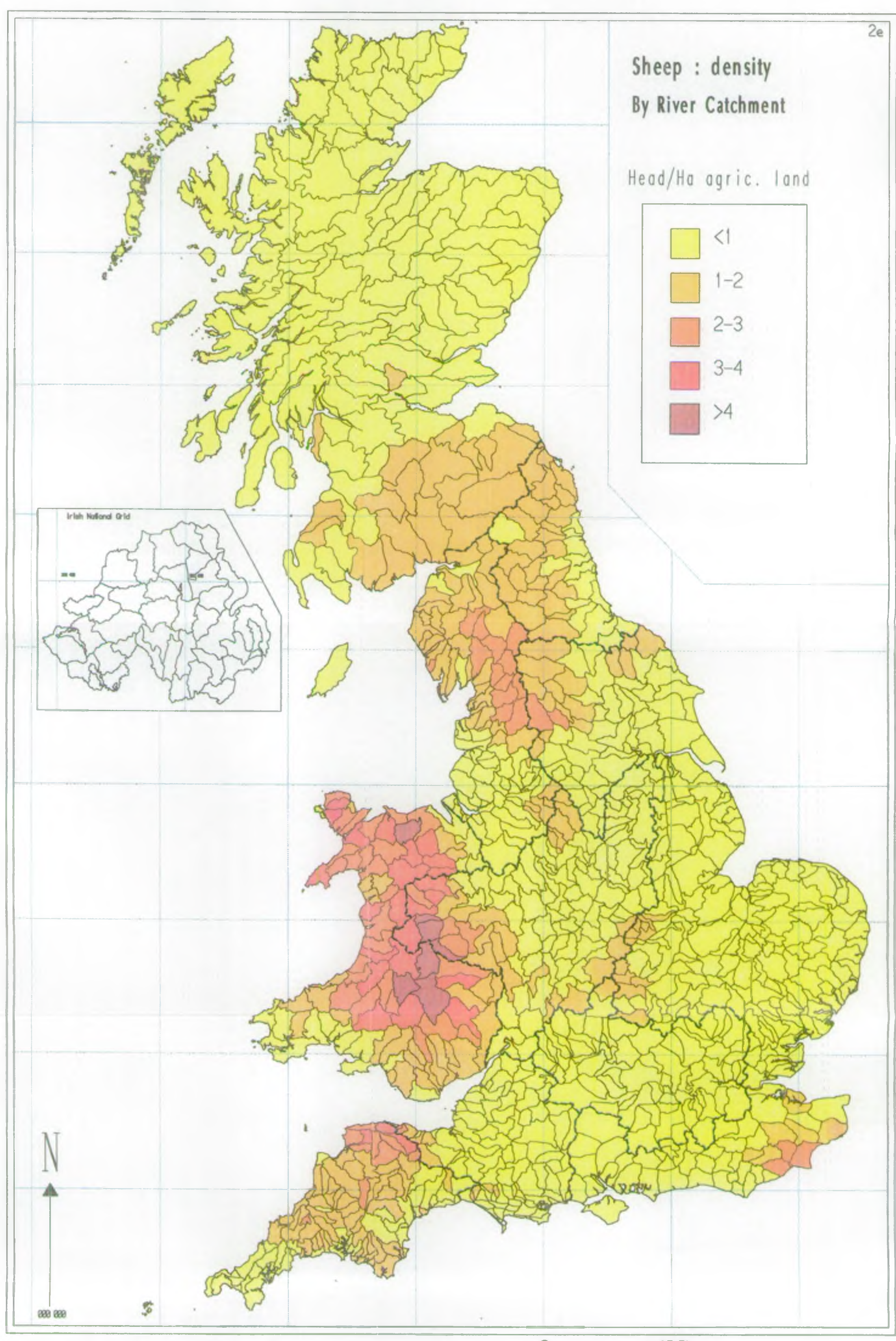


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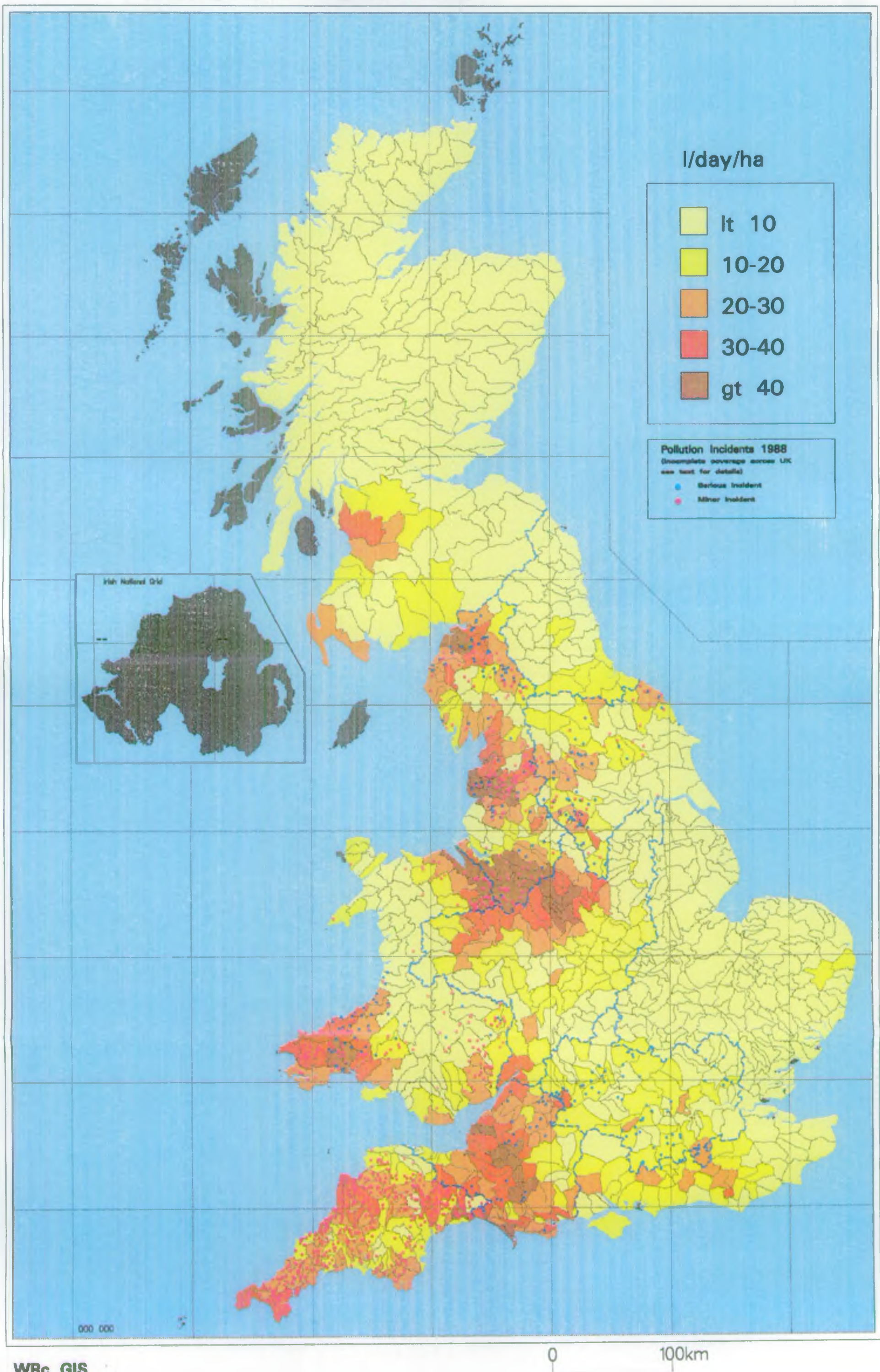
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100km



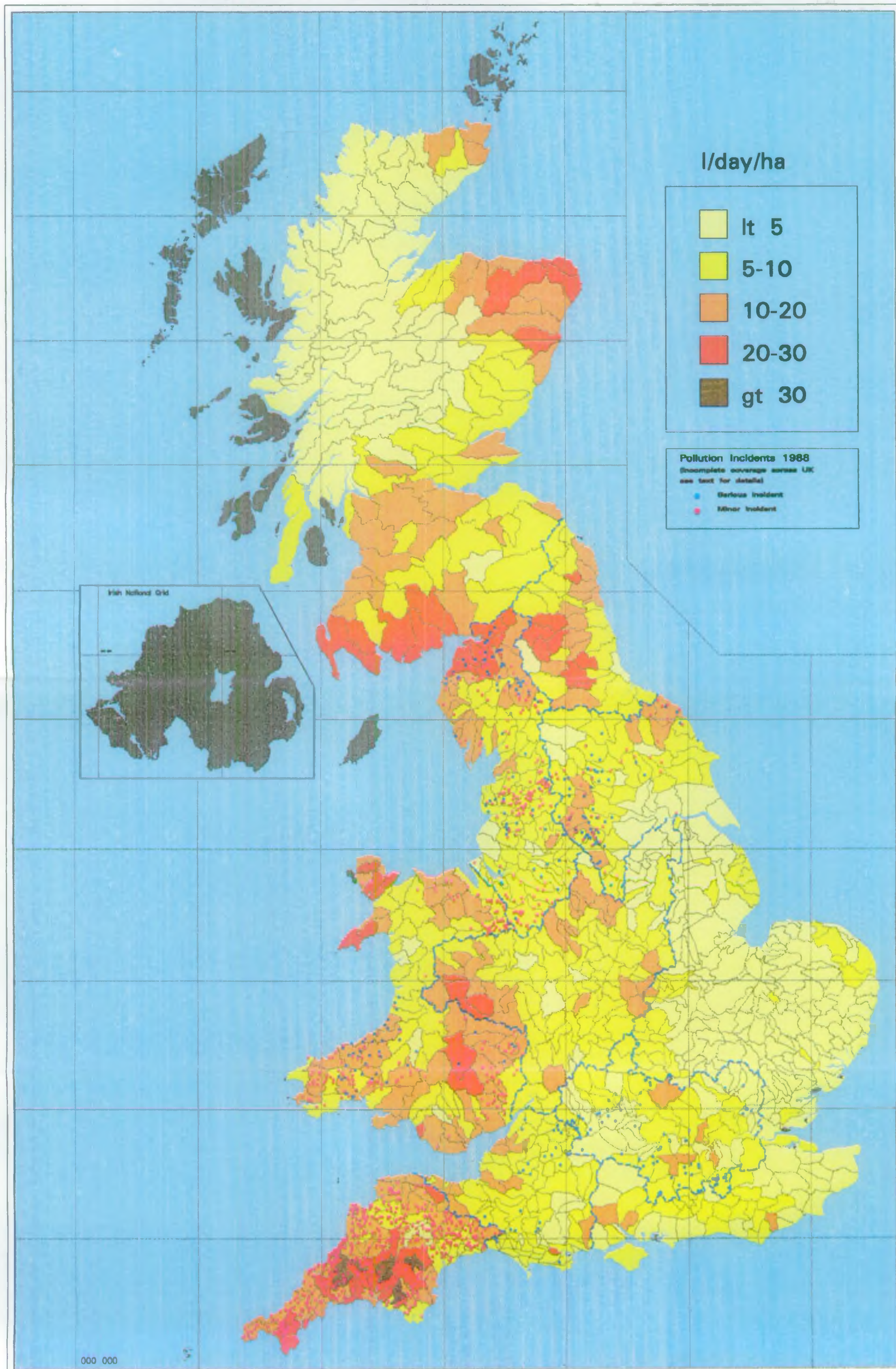


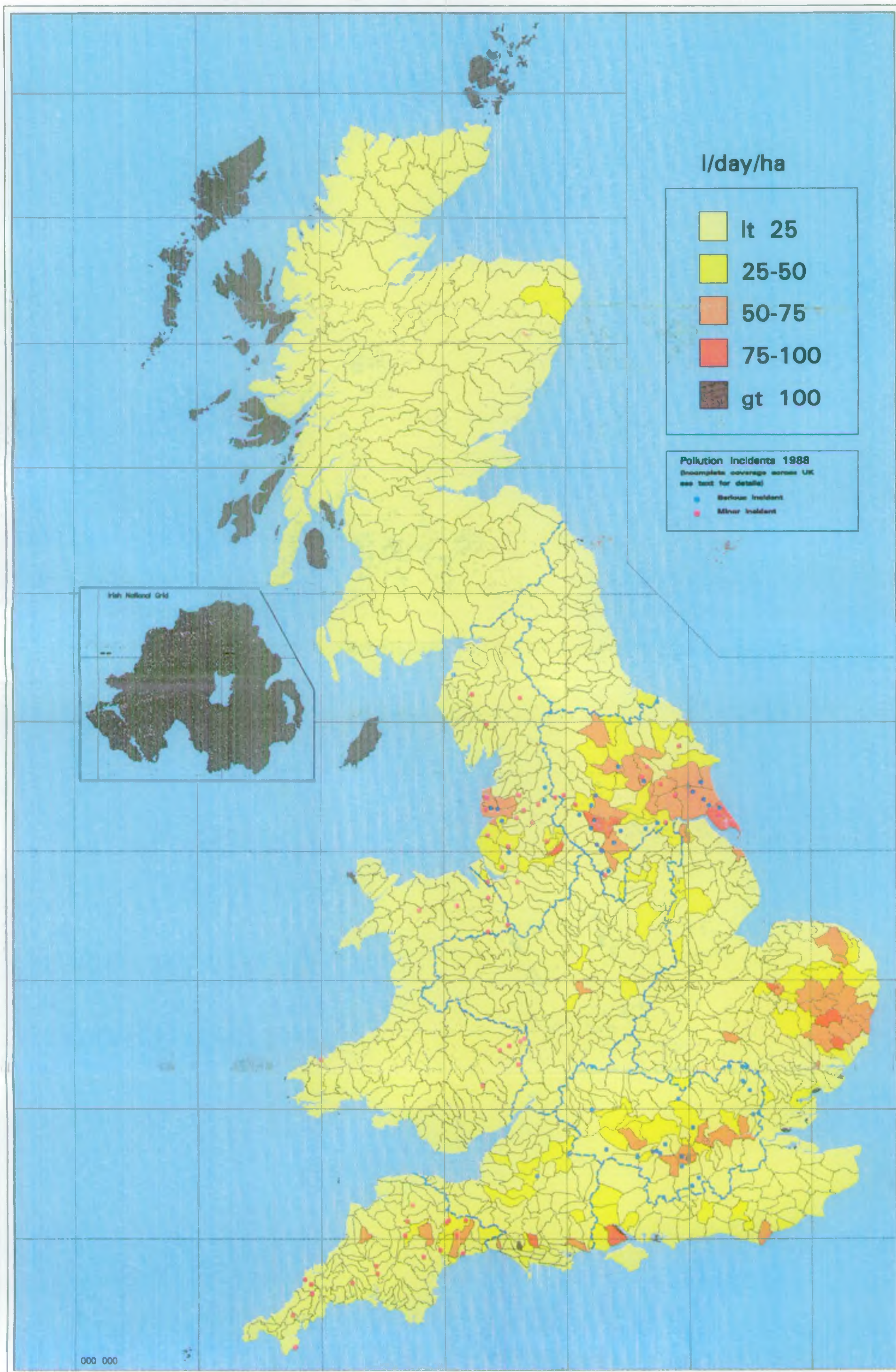
3a Volumetric organic waste loading from dairy cattle.
(litres/day/hectare of agricultural land)



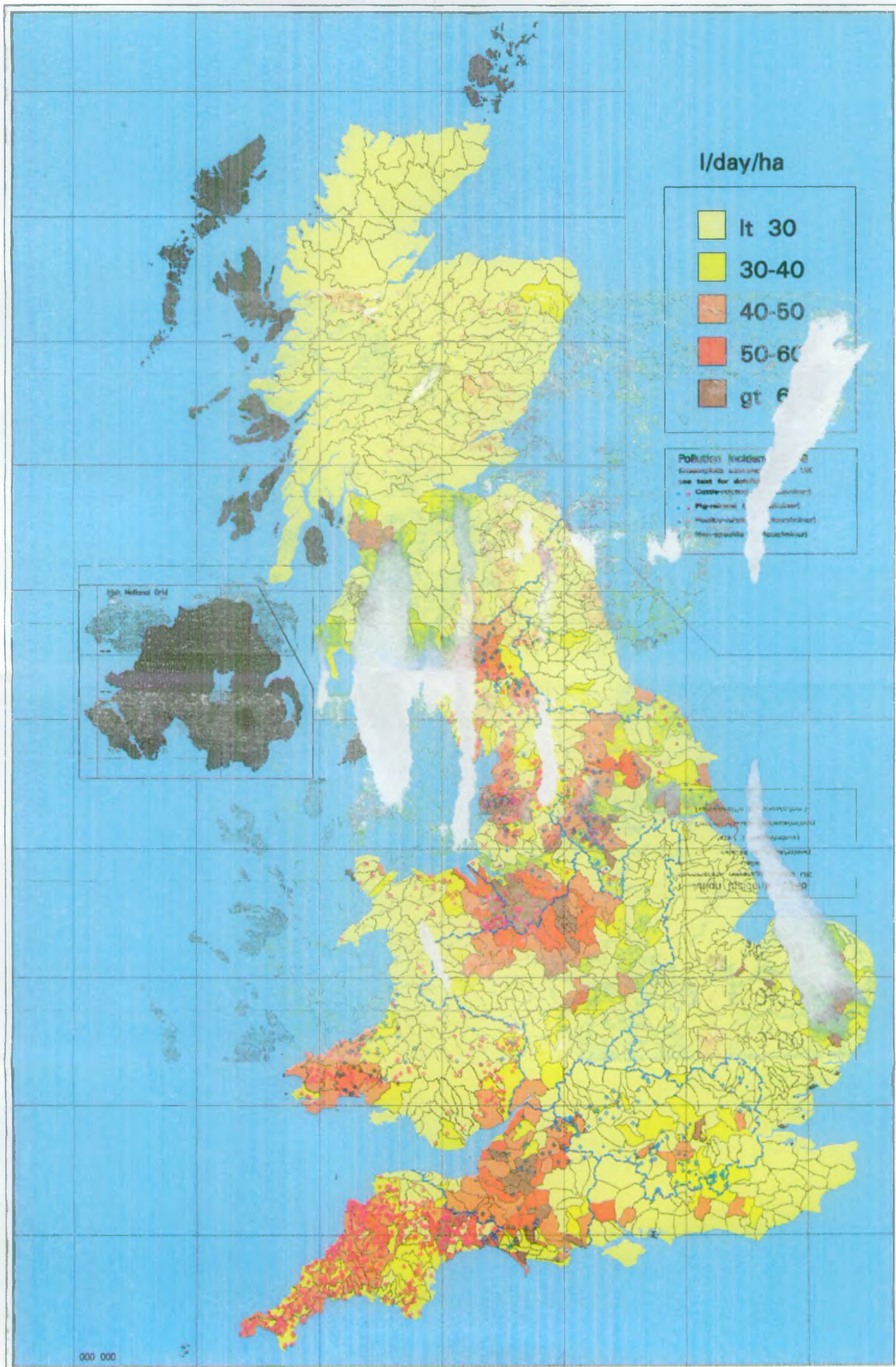
3b

Volumetric organic waste loading from beef cattle.
(litres/day/hectare of agricultural land)



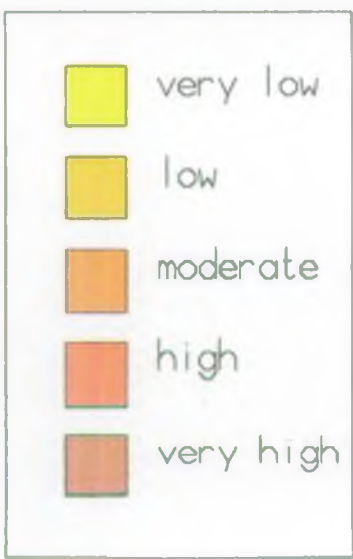


3e Volumetric organic waste loading from all livestock types.
(litres/day/hectare of agricultural land)

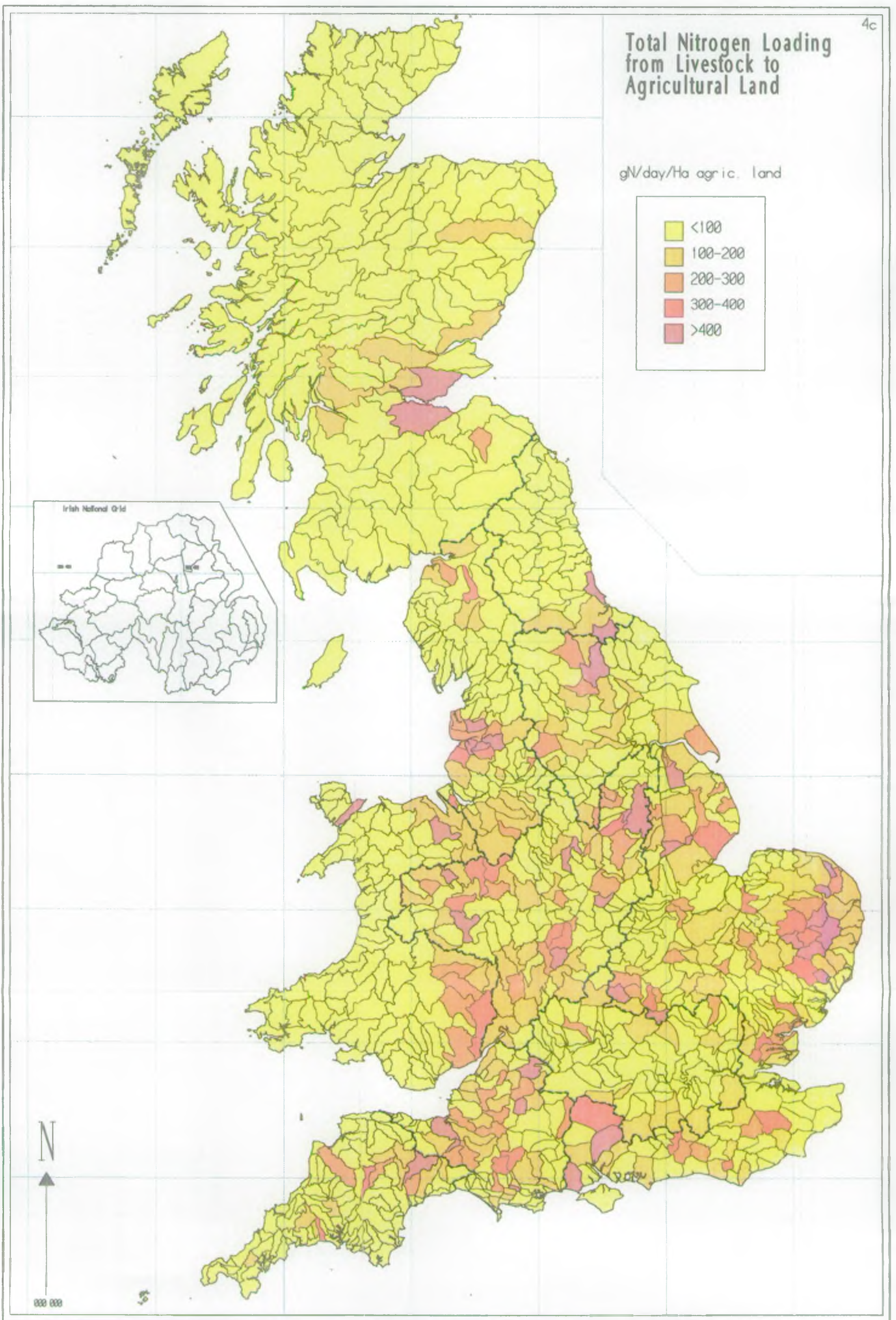


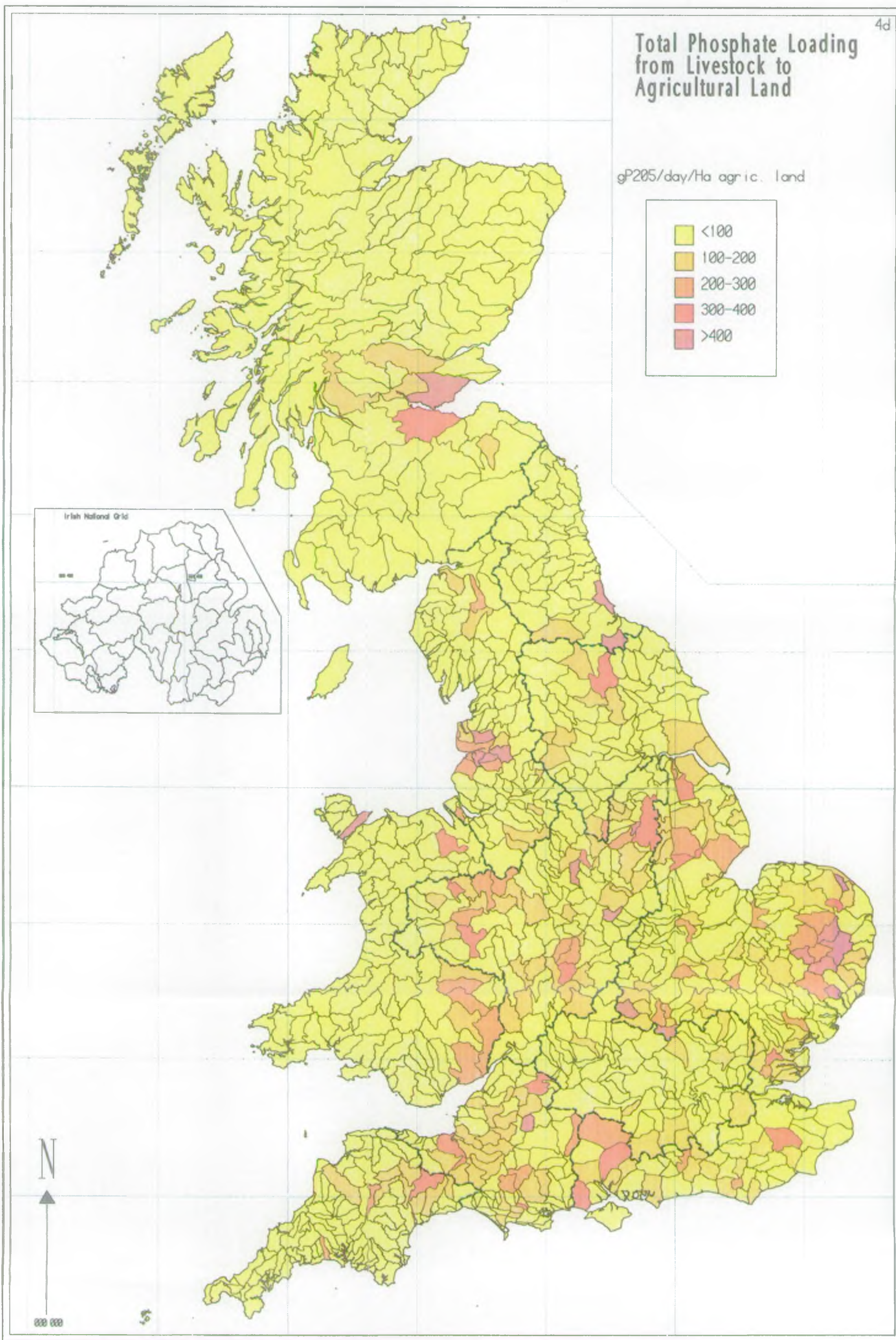
Total BOD Production from Livestock by River Catchment

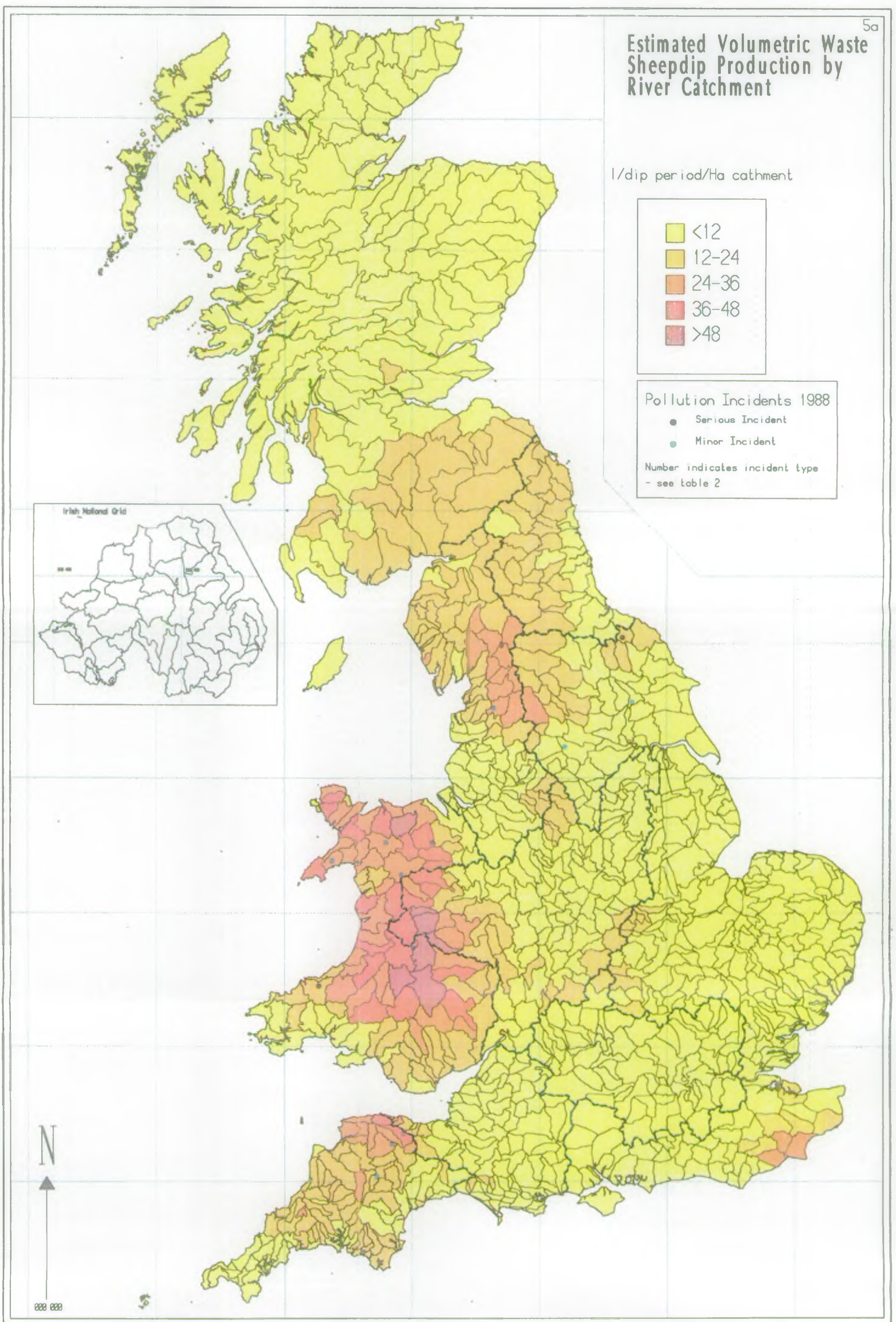
BOD Production Class

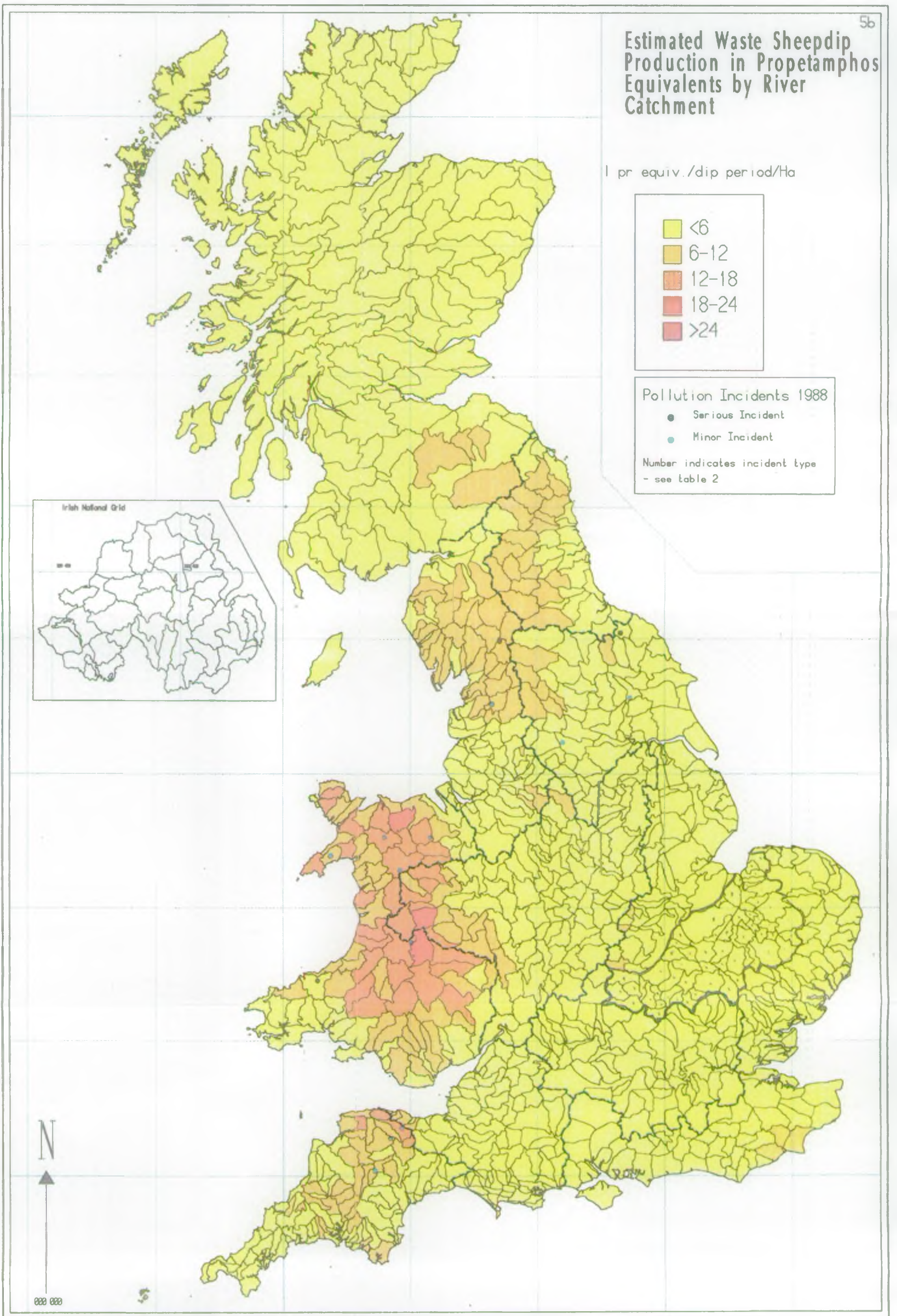


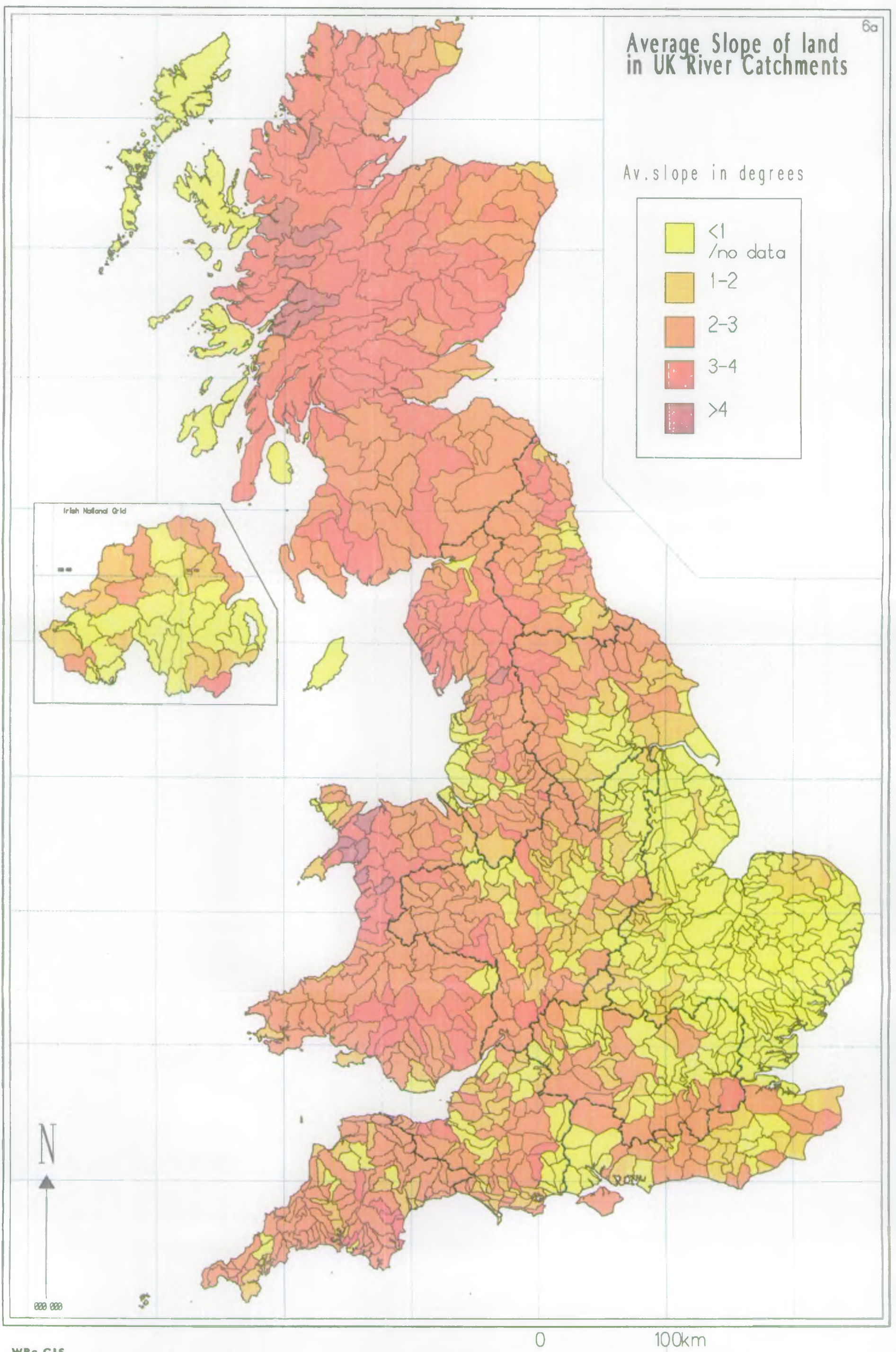
0 100km

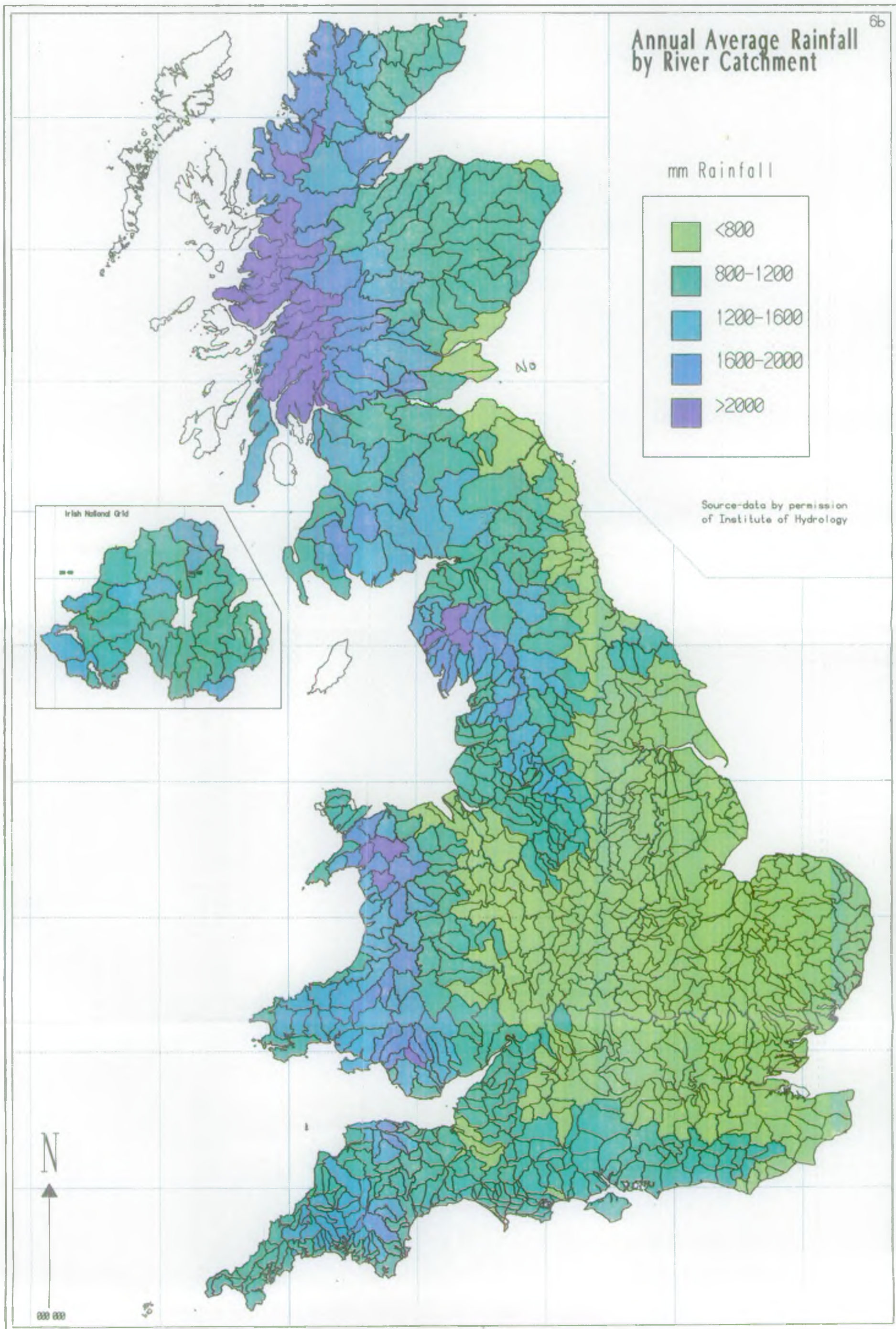


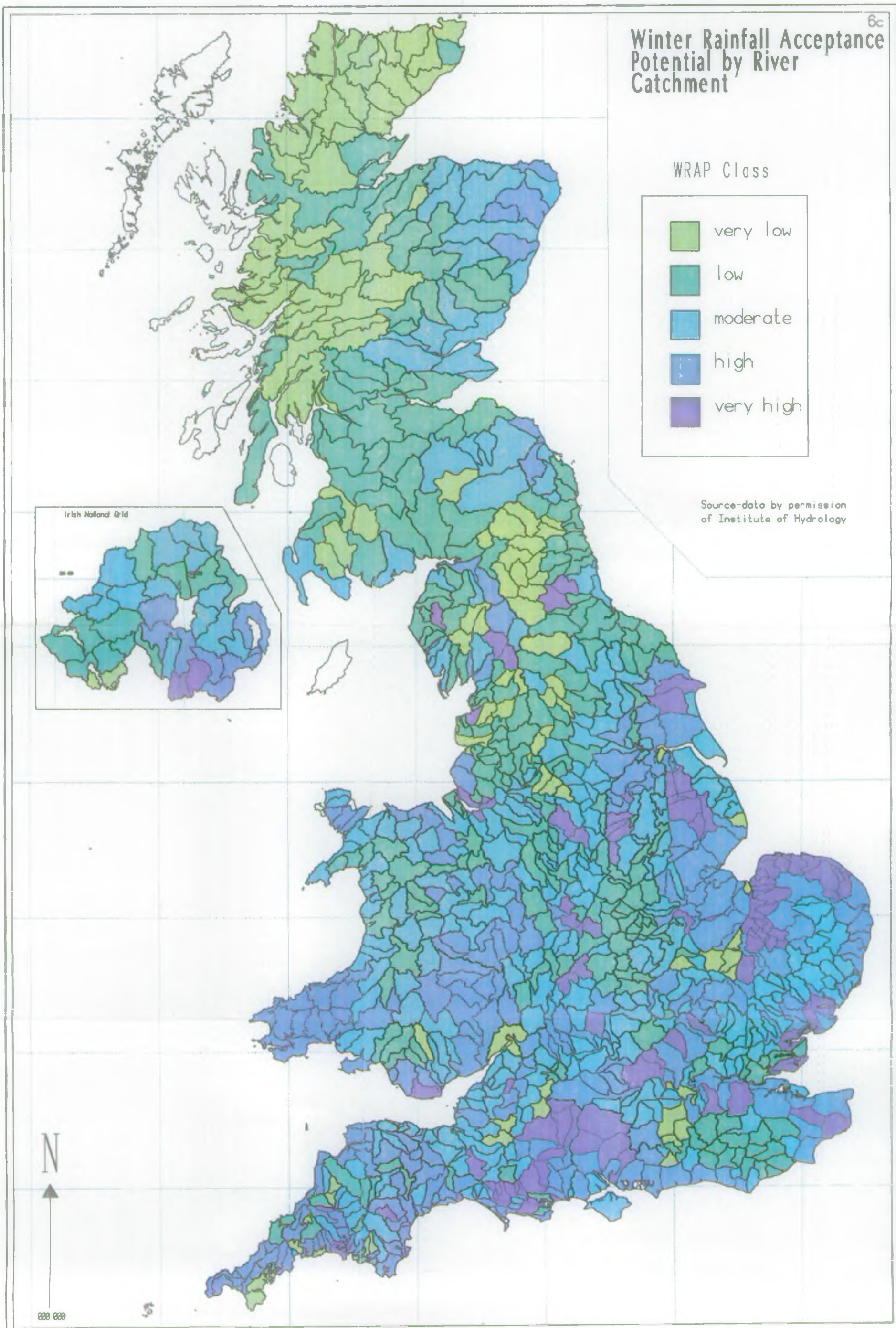




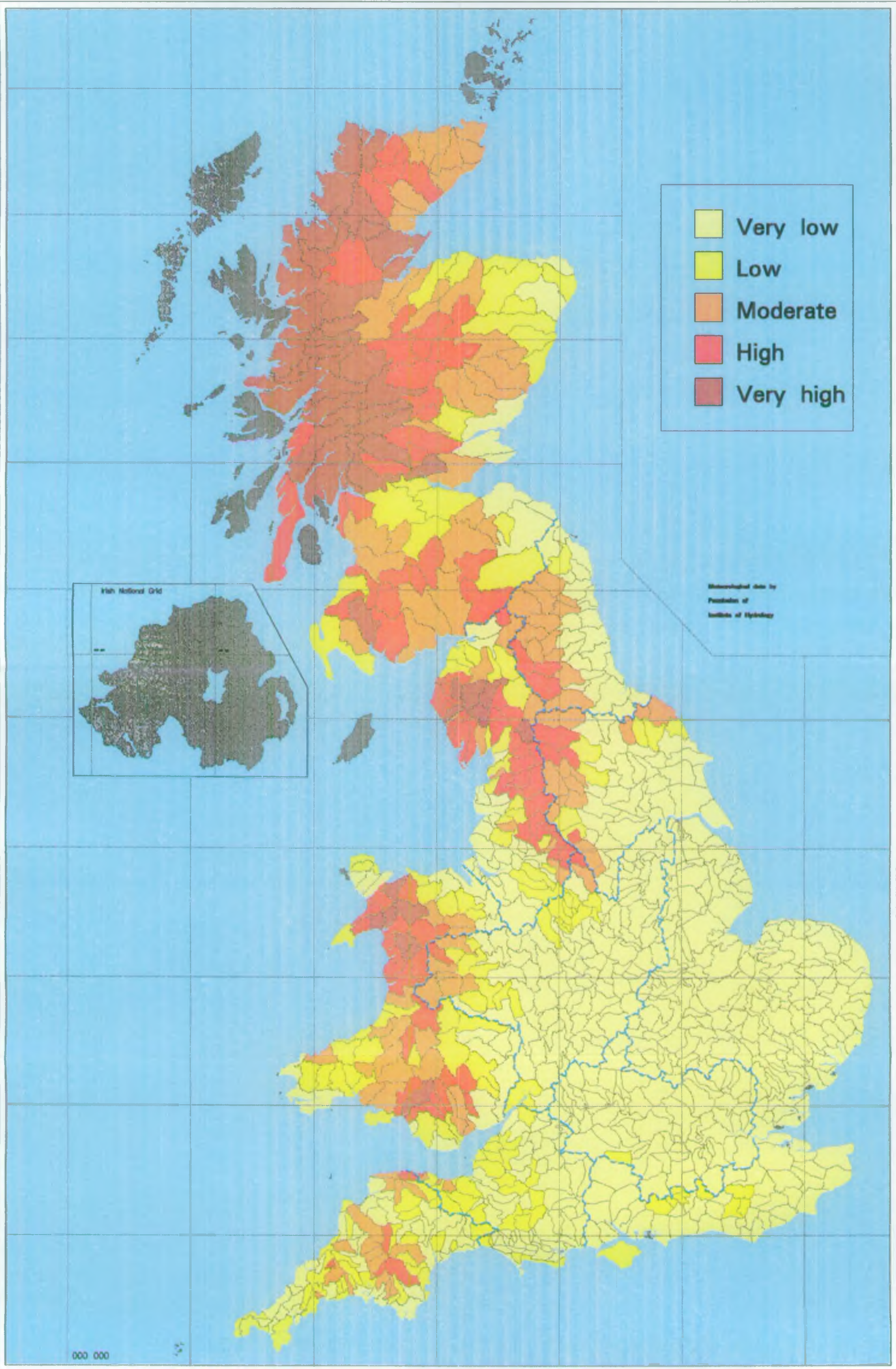




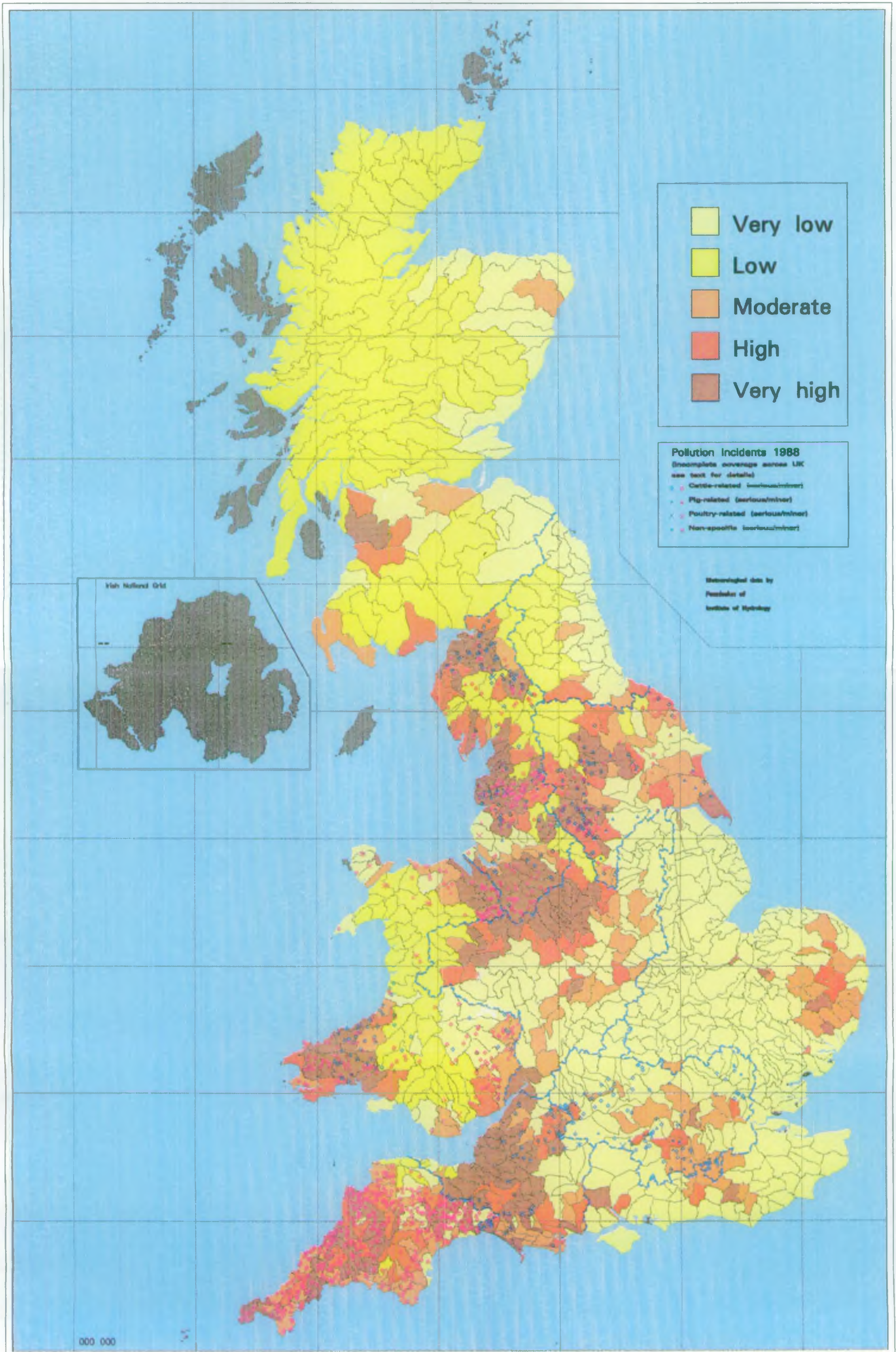




6d **Surface water run-off potential.**
(combining landslope, rainfall and soil permeability)



7a Organic pollution risk to surface waters from livestock farming.
(combining landslope, rainfall, soil permeability and organic waste loading)



Pollution Risk to Surface Waters from Waste Sheepdip

Risk Class

- very low/
no data
- low
- moderate
- high
- very high

Pollution Incidents 1988

- Serious Incident
- Minor Incident

Number indicates incident type
- see table 2



0 100km