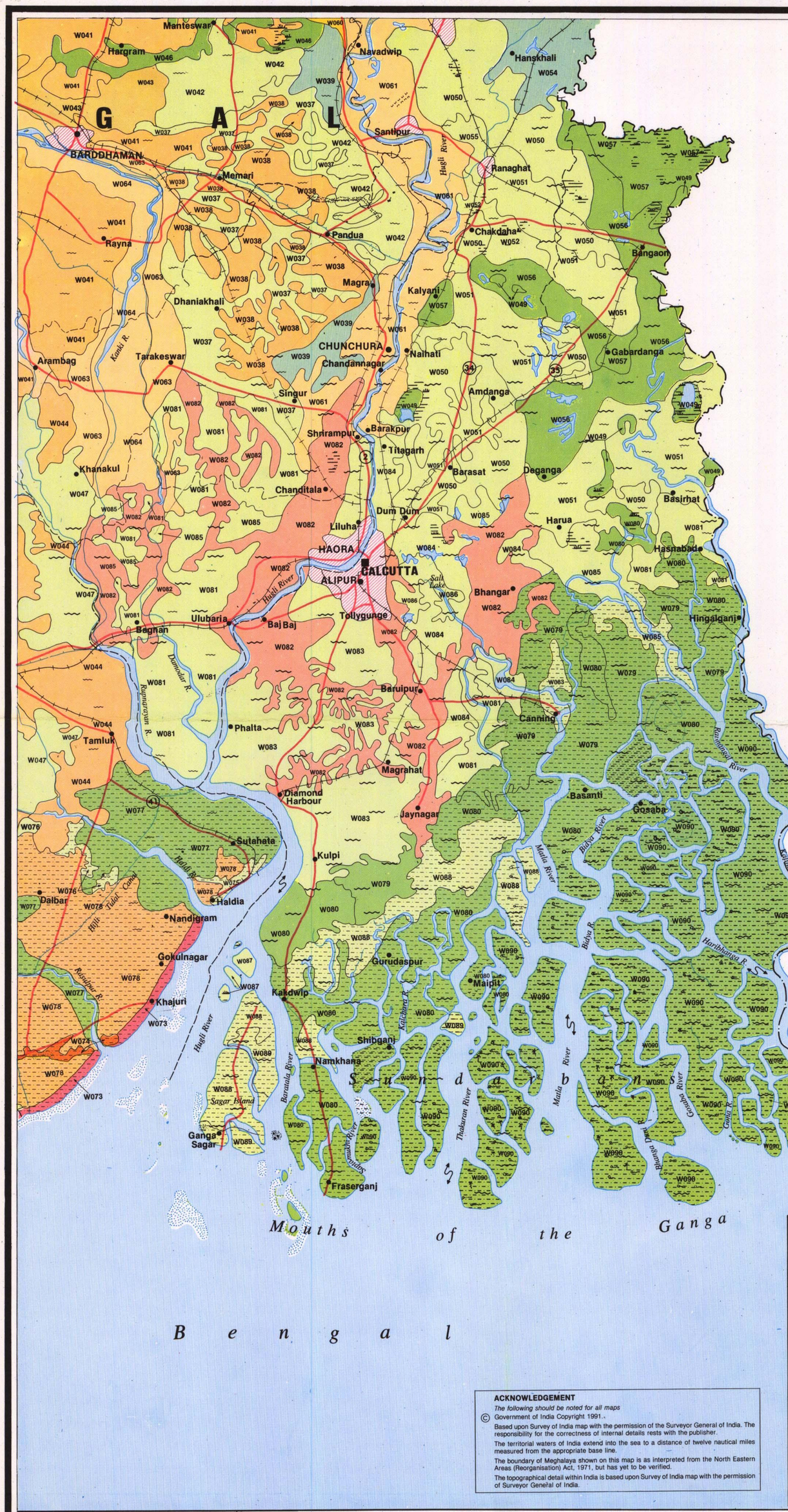
ISRIC
P.O. Box 353
6700 AJ Wageningen
The Netherlands



ACKNOWLEDGEMENT

The following should be noted for all maps

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The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The boundary of Meghalaya shown on this map is as interpreted from the North Eastern Areas (Reorganisation) Act, 1971, but has yet to be verified.

The topographical detail within India is based upon Survey of India map with the permission of Surveyor General of India.

NOMENCLATURE

SOIL MOISTURE REGIME

Aquic — Wet soils that are seasonally saturated with water which affect plant growth.
Udic — Moist soils that do not remain dry for a sufficiently long period, that affect plant growth (a two cropped area)
Ustic — Soils with limited moisture but sufficient enough to grow a crop.

MAJOR SOILS

Entisols — Soils without any pedogenic horizon except an epipedon; the soils retain their original (parent material) structure.
Psamments — Sandy soils
Orthents — Common or typical soils of erosional surfaces
Fluvents — Alluvium-derived soils occurring in different regions
Inceptisols — Soils with weakly developed horizons, showing definite alteration of parent material in the form of developing of soil structure or soil colour
Alfisols — Soils having clay-enriched B horizon with medium to high base status (>35% throughout)

GRAVELLINESS

In Soil Units (W001-W005) gravel consists of rock fragments, (W091-W115) the term gravelliness suggests concretions of Fe-Mn and/or quartz.

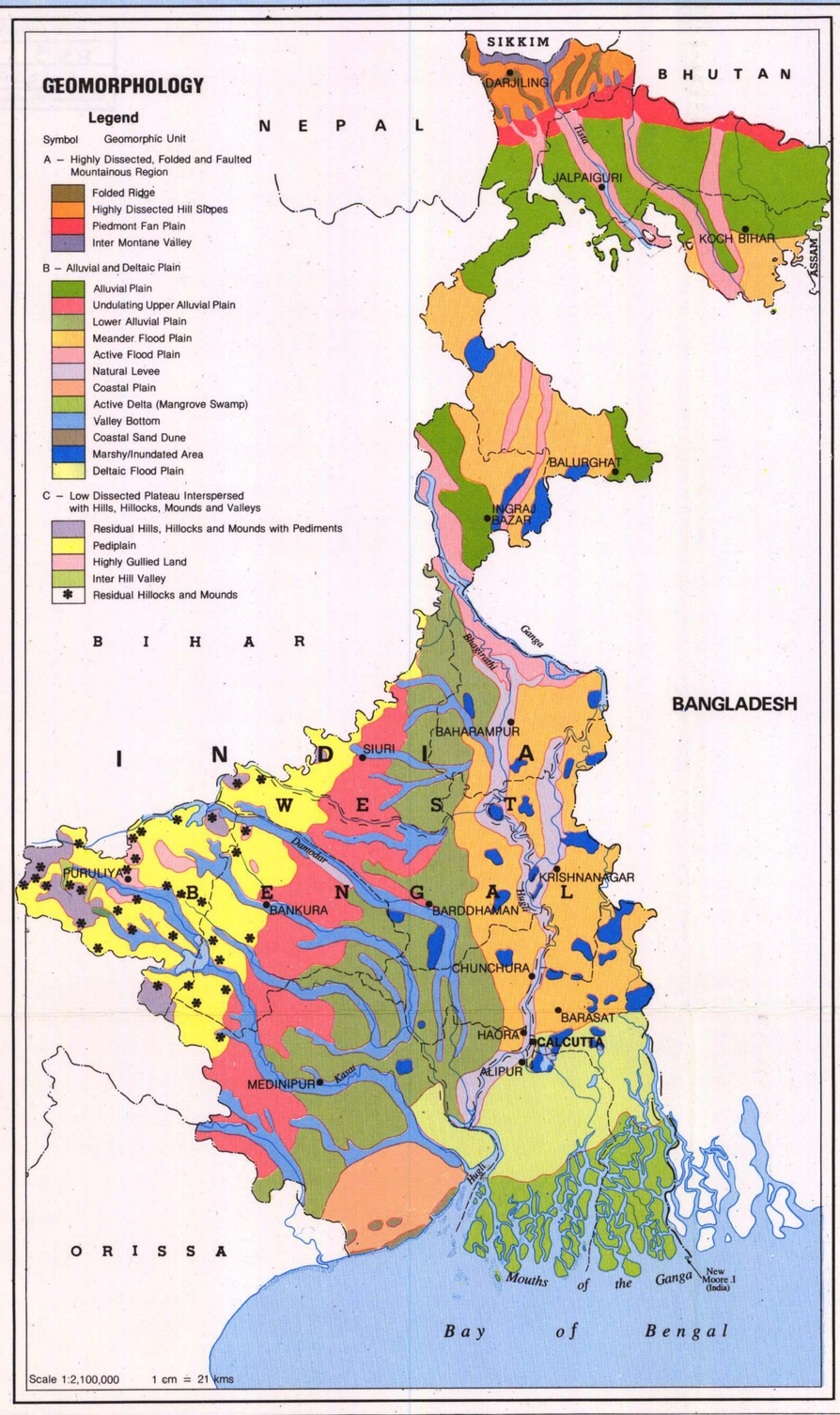
FLOODING

Moderate — Accumulation of water due to seasonal precipitation for < 3 months and occasional overflow.
Severe — Excessive accumulation of water > 3 months due to precipitation and occasional overflow and needs special management practice.

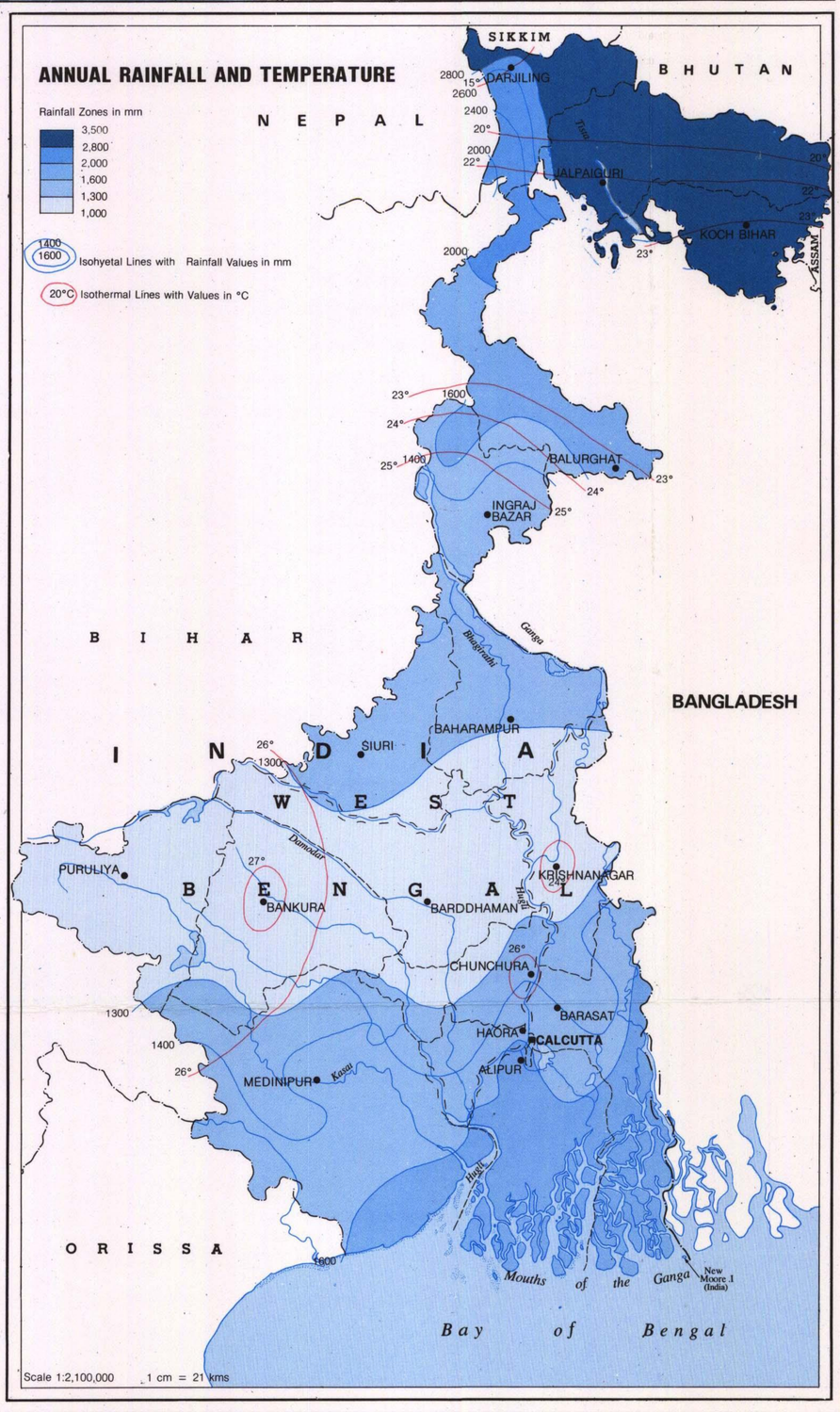
SALINITY

Moderate — The value of the electrical conductivity of the saturation extract ranges from 4-8 dSm^{-1}
Severe — The value of the electrical conductivity of the saturation extract ranges from 8-15 dSm^{-1}

GEOMORPHOLOGY



ANNUAL RAINFALL AND TEMPERATURE



W088	Very deep, poorly drained, fine soils[3] occurring on level to nearly level lower delta with clayey surface, severe flooding and moderate salinity (moderate extent)	O *Fine, Aeric Haplaquepts*	78.2 (0.88)
	associated with very deep, poorly drained, fine soils[2]	O *Fine, Typic Haplaquepts*	
W089	Very deep, poorly drained, fine soils[3] occurring on level to nearly level lower delta with clayey surface, severe flooding and moderate salinity (Limited extent)	O *Fine, Aeric Haplaquepts*	23.7 (0.27)
W090	Very deep, poorly drained, fine loamy soils[2] on level to nearly level lower delta with loamy surface, severe flooding and very strong salinity (extensive area)	O *Fine loamy, Typic Haplaquepts*	302.2 (3.41)
	associated with very deep, very poorly drained, fine loamy soils[1]	O *Fine loamy, Typic Fluvaquents*	

SOILS OF EASTERN PLATEAU (E) – CHOTANAGPUR PLATEAU (Ec)

Granite Gneiss Landscape (EcA) ***(Old red, yellow grey catenary soils)***

W091	Very deep, moderately well drained, fine loamy soils[3] occurring on very gently sloping to undulating foot hill slopes with loamy surface and severe erosion	O *Fine loamy, Typic Haplustalfs*	37.4 (0.42)
	associated with shallow, somewhat excessively drained, coarse loamy soils[2] subject to moderate erosion	O *Loamy, Lithic Ustochrepts*	
W092	Very shallow, well drained, gravelly loamy soils[1] occurring on gently sloping ridges with loamy to gravelly loamy surface and severe erosion	O *Loamy, Lithic Ustorthents*	4.2 (0.05)
	associated with shallow, moderately well drained, loamy soils[2]	O *Loamy, Lithic Ustochrepts*	
W093	Shallow, somewhat excessively drained, gravelly loamy soils[2] occurring on gently sloping subdued ridges with gravelly loamy surface and severe erosion	O *Loamy, Lithic Ustochrepts*	11.4 (0.13)
	associated with very shallow, excessively drained gravelly loamy soils[1]	O *Loamy-skeletal, Lithic Ustorthents*	
W094	Deep, well drained, loamy soils[3] occurring on very gently sloping to undulating plain with loamy surface and moderate erosion	O *Fine loamy, Typic Haplustalfs*	144.3 (1.63)
	associated with deep, moderately well drained, loamy soils[2]	O *Fine loamy, Typic Ustochrepts*	
W095	Shallow, moderately well drained, coarse loamy soils[2] occurring on gently sloping to undulating plain with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Ustochrepts*	58.4 (0.66)
	associated with shallow moderately well drained, gravelly loamy soils[3]	O *Loamy, Lithic Haplustalfs*	
W096	Shallow, moderately well drained, gravelly loamy soils[3] occurring on very gently sloping to undulating plain with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Haplustalfs*	116.6 (1.31)
	associated with shallow, well drained, fine loamy soils[3]	O *Fine loamy, Plinthustalfs*	
W097	Very deep, imperfectly drained, fine soils[3] occurring on very gently sloping to undulating plain with loamy surface and moderate erosion	O *Fine, Typic Haplustalfs*	131.3 (1.48)
	associated with deep, imperfectly drained, fine soils[3]	O *Fine, Aquic Haplustalfs*	
W098	Very deep, moderately well drained, fine loamy soils[3] occurring on very gently sloping to undulating plain with loamy surface and moderate erosion	O *Fine loamy, Typic Haplustalfs*	172.8 (1.95)
	associated with very deep, imperfectly drained, fine loamy soils[3]	O *Fine loamy, Aquic Paleustalfs*	
W099	Shallow, well drained, gravelly loamy soils[3] occurring on very gently sloping to undulating granite-gneiss plain with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Haplustalfs*	83.3 (0.94)
	associated with deep, imperfectly drained, fine loamy soils[2]	O *Fine loamy, Typic Ustochrepts*	
W100	Very deep, moderately well drained, fine loamy soils[3] occurring on very gently sloping to undulating plain with loamy surface and moderate erosion	O *Fine loamy, Typic Haplustalfs*	45.0 (0.51)
	associated with deep, moderately well drained, fine loamy soils[2]	O *Fine loamy, Typic Ustochrepts*	
W101	Very deep, imperfectly drained, fine loamy soils[2] occurring on very gently sloping to undulating plain with loamy surface and moderate erosion	O *Fine loamy, Typic Ustochrepts*	6.6 (0.07)
	associated with shallow, somewhat excessively drained, coarse loamy soils[1]	O *Loamy, Lithic Ustorthents*	
W102	Very deep, well drained, fine loamy soils[3] occurring on very gently sloping to undulating plateau with loamy surface and moderate erosion	O *Fine loamy, Typic Haplustalfs*	24.7 (0.28)
	associated with shallow, well drained, gravelly loamy soils[2]	O *Loamy, Lithic Ustochrepts*	
W103	Very deep, well drained, fine loamy soils[3] occurring on very gently. sloping to undulating plateau with loamy surface and moderate erosion	O *Fine loamy, Rhodic Paleustalfs*	9.8 (0.11)
	associated with very deep, moderately well drained, fine soils[3]	O *Fine, Typic Rhodustalfs*	
W104	Very deep, imperfectly drained, fine soils[3] occurring on gently sloping to undulating plateau with loamy surface and severe erosion	O *Fine, Typic Paleustalfs*	61.9 (0.70)
	associated with very deep imperfectly drained, fine soils[3]	O *Fine, Typic Haplustalfs*	
W105	Shallow, well drained, gravelly loamy soils[1] occurring on very gently sloping to undulating plateau with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Ustorthents*	15.3 (0.17)
	associated with rock outcrops	O *Rock outcrops*	
W106	Very deep, well drained, fine loamy soils[2] occurring on very gently sloping to undulating plateau with loamy surface and moderate erosion	O *Fine loamy, Typic Ustochrepts*	14.0 (0.16)
	associated with shallow, well drained, gravelly loamy soils[1]	O *Loamy-skeletal, Lithic Ustorthents*	
W107	Very deep, well drained, coarse loamy soils[1] occurring on very gently sloping valleys on undulating plateau with loamy surface and moderate erosion	O *Coarse loamy, Typic Ustifluvents*	69.7 (0.79)
	associated with very deep, moderately well drained fine loamy soils[2]	O *Fine loamy, Typic Ustochrepts*	

Dharwar Landscape (EcB) ***(Lateritic soils)***

W108	Very shallow. somewhat excessively drained, gravelly loamy soils[1] occurring on gently sloping narrow hill slopes with gravelly loamy surface and moderate erosion	O *Loamy-skeletal, Lithic Ustorthents*	46.3 (0.52)
	associated with deep, well drained, fine loamy soils[3]	O *Fine loamy, Typic Haplustalfs*	
W109	Very shallow, well drained, gravelly loamy soils[1] on gently sloping hill slopes with gravelly loamy surface and severe erosion	O *Loamy, Lithic Ustorthents*	9.7 (0.11)
	associated with rock outcrops	O *Rock outcrops*	
W110	Shallow, moderately well drained, coarse loamy soils[2] occurring on gently sloping subdued hill slopes with loamy surface and severe erosion	O *Loamy, Lithic Ustochrepts*	6.9 (0.08)
	associated with very shallow, well drained, coarse loamy soils[1]	O *Loamy, Lithic Ustorthents*	
W111	Deep, moderately well drained, fine loamy soils[3] occurring on very gently sloping to undulating upland with loamy surface and slight erosion	O *Fine loamy, Typic Haplustalfs*	58.9 (0.66)
	assoeiated with moderately deep, well drained, fine loamy soils[3]	O *Fine loamy, Typic Paleustalfs*	
W112	Very deep, moderately well drained, fine loamy soils[3] occurring on very gently sloping to undulating upland with loamy surface and moderate erosion	O *Fine loamy, Typic Haplustalfs*	47.0 (0.53)
	associated with moderately deep, well drained, fine loamy soils[3]	O *Fine loamy, Typic Paleustalfs*	

Gondwana Landscape (EcC) ***(Lateritic shallow soils)***

W113	Shallow, imperfectly drained, coarse loamy soils[3] occurring on very gently sloping to undulating plain with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Haplustalfs*	46.1 (0.52)
	associated with deep, imperfectly drained, fine soils[3]	O *Fine, Aquic Haplustalfs*	
W114	Shallow, moderately well drained, coarse loamy soils[3] occurring on gently sloping to undulating plain with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Haplustalfs*	52.1 (0.59)
	associated with shallow, imperfectly drained, gravelly loamy soils[2]	O *Loamy, Lithic Ustochrepts*	
W115	Shallow, moderately well drained, gravelly loamy soils[3] occurring on very gently sloping to undulating plateau with gravelly loamy surface and moderate erosion	O *Loamy, Lithic Haplustalfs*	23.9 (0.27)
	associated with shallow, imperfectly drained, gravelly loamy soils[2]	O *Loamy, Lithic Ustochrepts*	

Foot Notes

* Mineralogy and temperature regimes are not indicated as map units W001-5 qualify for **mixed, thermic** and all other soils qualify for **mixed, hyperthermic**

** 1:Most Recent Soils – No profile development; absence of any diagnostic horizons
2:Sub-recent Soils – Initiation of profile development with a cambic horizons
3:Old Soils – Appreciable profile development with an argillic horizon