

Survey of India topographical maps:
Reference scheme of Open Series
Map (OSM)

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❑ 'Open Series Map' have been introduced as per the [National Map Policy of 2005](#) by [Survey of India](#).

❑ Enhanced by the latest technology (RS and GIS) to meet the multidisciplinary needs of national security, suitable national development and new information market.

❑ The OSM numbering system based on [International Map of the World \(IMW\)](#) is used.

❑ The '[International Map of the World \(IMW\)](#)' was a project which started in 1913 to create a complete map of the world as per internationally agreed and consistent specifications

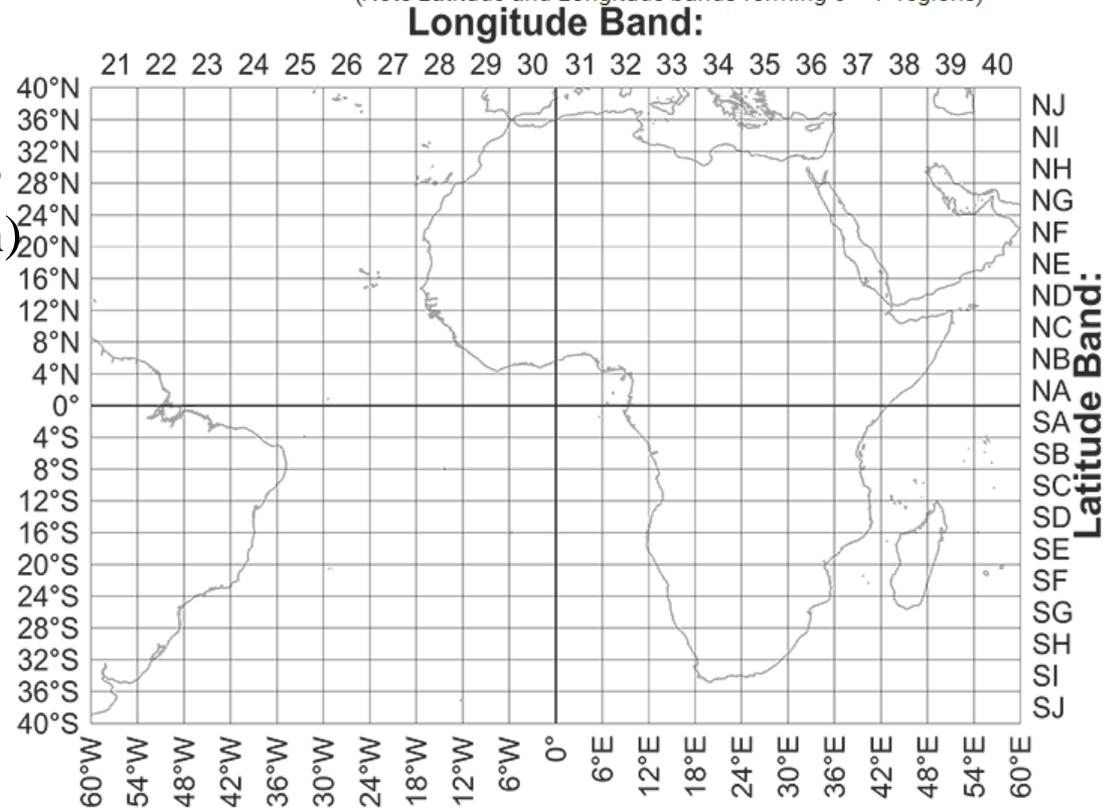
The International Map of the World series

Map numbering is of the form '**NA-12A**'

- The first letter is either '**N**' or '**S**' to denote the hemisphere (North/South) with respect to the equator.

- A second letter denotes the 4° latitude band with alphabet increasing as latitude moves away from equator. So sheets between 12°N to 8°N would be '**NC**' and between 4°S to 8°S would be '**SB**'.

International Map of the World scheme for a part of the world:
(Note Latitude and Longitude bands forming 6°×4° regions)



The next number denotes the 6° longitude band with numbering starting at 1 from 180°W (i.e. 1 between 180°W and 174°W) going on to 60 (i.e. between 174°E-180°E). So sheet between 72° to 78°E and 12°N to 8°N will be '**NC-43**'. Similarly between 132°W to 126°W and 4°S to 8°S would be '**SB-9**'. The longitude band span increased to 12° from 60° latitude and to 24° from 76° latitude due to the decrease in physical span of longitude band.

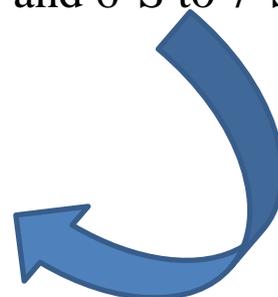
•Each $6^\circ \times 4^\circ$ rectangle is further subdivided into 24 squares of $1^\circ \times 1^\circ$. Each square is indicated serially by an alphabet increasing first towards east and then towards south, starting with 'A'.

•So for sheet between 74° to 75° E and 11° N to 10° N we get **NC-43I**:

12°N	A	B	C	D	E	F	
11°N	G	H	I	J	K	L	
10°N	M	N	O	P	Q	R	
9°N	S	T	U	V	W	X	
8°N							
	72°E	73°E	74°E	75°E	76°E	77°E	78°E

4°S	A	B	C	D	E	F	
5°S	G	H	I	J	K	L	
6°S	M	N	O	P	Q	R	
7°S	S	T	U	V	W	X	
8°S							
	132°W	131°W	130°W	129°W	128°W	127°W	126°W

For sheet between 128° W to 127° W and 6° S to 7° S we get **SB-9Q**:

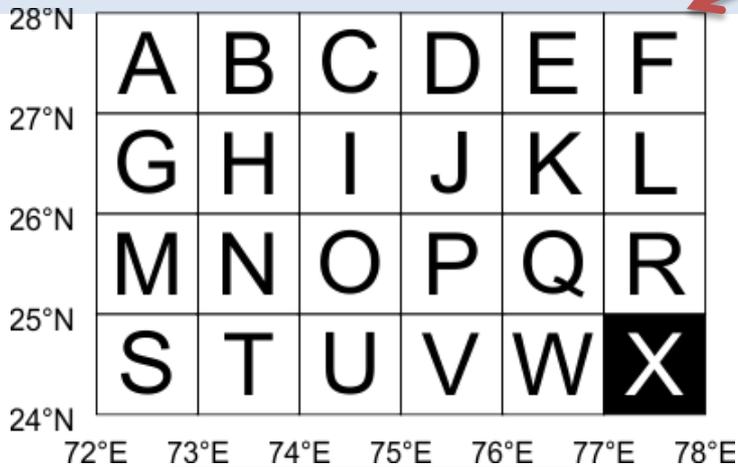


OSM NUMBERING SYSTEM

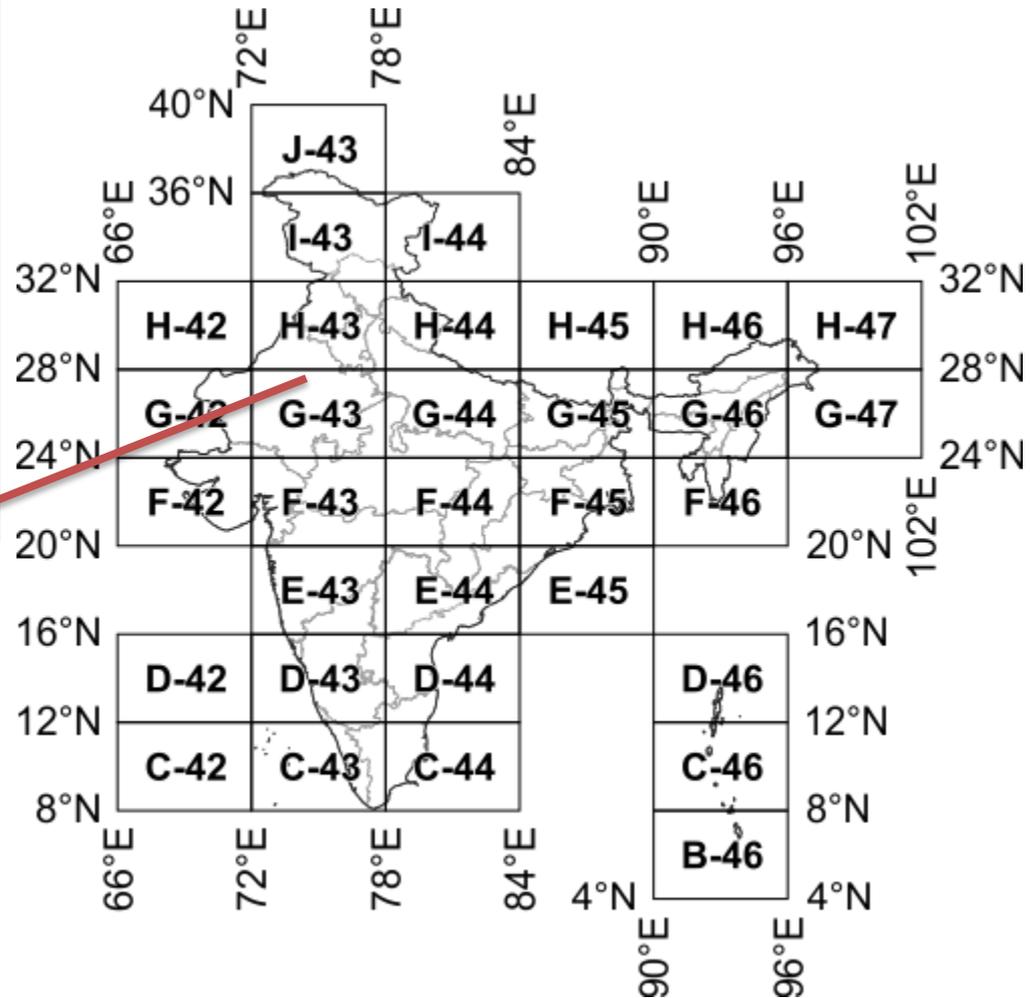
The next alphabet and number of the IMW map number denotes the $6^\circ \times 4^\circ$ region of the IMW series. So sheet with Kalyanpur (77.65489°E 24.11981°N) would be in '**G-43**' (from NG-43):

Since the IMW map number for India will always start with 'N' (India being in the northern hemisphere), the first letter is omitted.

Each $6^\circ \times 4^\circ$ rectangle is further subdivided into **24 squares of $1^\circ \times 1^\circ$** . Each square is indicated serially by an alphabet increasing first towards east and then towards south, starting with 'A'. So sheet for Kalyanpur (77.65489°E 24.11981°N) falls within '**G-43X**':



DEGREE SHEET: G43X
1:250,000

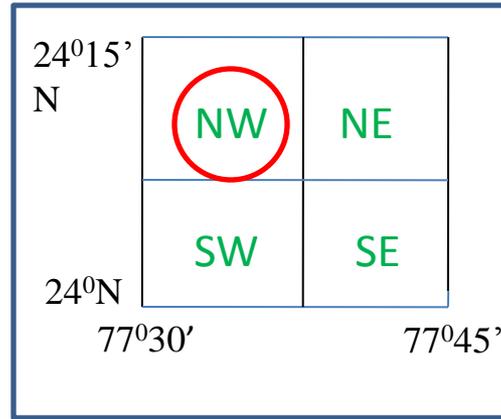


Million sheets, 1: 1000,000

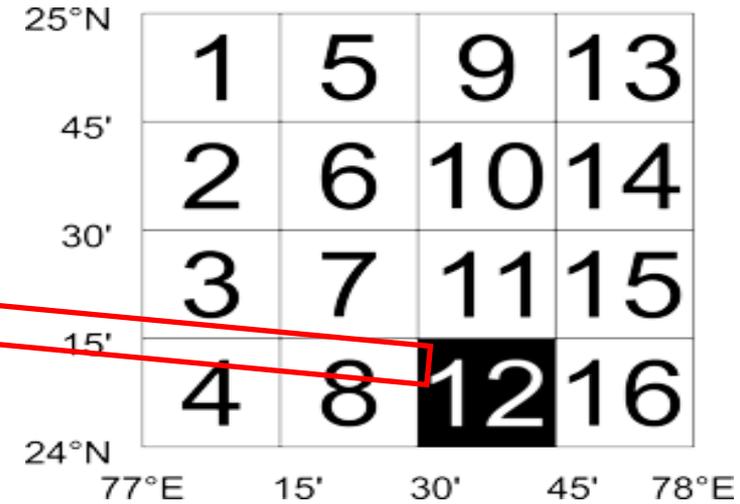
Each $1^{\circ} \times 1^{\circ}$ square is further divided into 16 squares of $15' \times 15'$ (15 minutes \times 15 minutes). Each square is indicated serially by a number increasing first towards south and then towards east, starting with '1' (similar to the system adopted in [India and Adjacent Countries](#)). So for the map sheet for Kalyanpur ($77^{\circ}39.293'E$ $24^{\circ}7.187'N$) would be '**G-43X-12**':

A 15' minute sheet can be divided in *two types*:

First, each sheet contains 4 quadrant sheets ($7'30'' \times 7'30''$) on 1:25,000 scale and designated as NW, NE, SE and SW.



Quadrant Sheet: G43X12NW
1:25,000



15' Sheet: G43X12
1:50,000

Second, each contains 25 sheets of dimension (3' X 3') on 1:10,000 scale and are designated by alphabets, A-Y.

24°15' N	A	F	K	P	U	
24°12'						
24°09'	B	G	L	Q	V	
24°06'	C	H	M	R	W	
24°03'	D	I	N	S	X	
24°0' N	E	J	O	T	Y	
	77°30'E	77°33'	77°36'	77°39'	77°42'	77°45'

25°N	1	5	9	13	
45'	2	6	10	14	
30'	3	7	11	15	
15'	4	8	12	16	
24°N	77°E	15'	30'	45'	78°E

3' Sheet: G43X12U
1:10,000

Each 3'-Sheet contains 25 sheets of (36" x 36") on 1:2000 scale and are designated by numerals, 1-25.

1	6	11	16	21
2	7	12	17	22
3	8	13	18	23
4	9	14	19	24
5	10	15	20	25

77°30'E 77°30'36" 77°31'12" 77°31'48" 77°32'24" 77°33'E

☐ These are the largest scale maps published by the SOI, larger than cadastral maps (1:4000).

☐ LS sheets