

MINISTRY OF ENVIRONMENT AND FORESTS**NOTIFICATION**

New Delhi, the 6th February, 2002

S.O. 167(E).— The following notification which the Central Government proposes to issue in exercise of the powers conferred by sub-section (1) read with clause (v) of sub-section 2 of Section 3 of the Environment (Protection) Act 1986 (29 of 1986) is hereby published as required under sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 for information of all persons likely to be affected thereby; and notice is hereby given that the said draft notification shall be taken into consideration after the expiry of a period of sixty days from the date on which copies of the Gazette of India containing this notification are made available to the public;

Any person desirous of making any objection or suggestion in respect of the said draft notification may forward the same in writing for consideration of the Central Government within the period so specified to the Secretary to the Government of India, Ministry of Environment & Forests, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi 110 003.

DRAFT PROPOSALS

1. (a) It is proposed to notify Matheran and surrounding region as an Eco Sensitive Zone. The Eco Sensitive Zone shall consist of Matheran Hill Station Municipality and its environs. The map of the Eco Sensitive Zone is at Annexure-A. The description of the boundary along with the list of villages is at Annexure-B.
- (b) All activities in the forest (both within and outside municipal areas) shall be governed by the provisions of the Indian Forests Act, 1972 (16 of 1927) and Forest (Conservation) Act 1980 (69 of 1980). All activities in the sanctuaries and national parks shall be governed by the provisions of the Wildlife (Protection) Act, 1972 (53 of 1972).
2. The following activities are proposed to be regulated in the Eco Sensitive Zone, namely: -
 - (a) **Master Plan for Eco-sensitive zone: --**
 - (i) Master plan for the Eco-Sensitive Zone shall be prepared by the State Government under the Maharashtra Regional and Town Planning Act 1966 within a period of two years from the date of publication of this notification and approved by the Ministry of Environment and Forests in the Government of India. The Master Plan shall provide for restoration of denuded areas, management of catchment areas, provision for fuel wood, needs of local community and indicate areas where industries may be permitted.
 - (ii) The Master Plan for Eco-sensitive zone shall demarcate all the existing gaothans, gaothan expansion areas, forests, green areas, horticultural areas, agricultural areas, orchards, tribal areas including tribal hamlets, natural springs, natural heritage sites and other environmentally and ecologically sensitive areas. No change of land use

from green uses such as horticulture areas, agriculture, parks and other like places to non-green uses and tribal uses to non-tribal uses shall be permitted in the Master Plan for Eco-sensitive zone without the prior approval of the Central Government in the Ministry of Environment and Forests. The Master Plan shall also indicate measures and lay down stipulations for regulating traffic, especially through traffic in the Eco Sensitive Zone.

- (iii) The areas within and outside Matheran municipal area shall have separate area Plans which may be prepared by the State Government as a component of the Master Plan and concurrence of the Ministry of Environment & Forests shall be obtained on this. All habitations in the Eco-Sensitive Zone having populations of more than 5000 should also have Area Development Plans. These shall include building regulations for the gaathan areas
- (iv) Pending the preparation of and approval by the Ministry of Environment & Forests to the Master Plan for Eco-sensitive zone there shall be no increase in the existing parameters of permissible Floor Area Ratio, permissible height, permissible maximum number of storeys and permissible coverage in Matheran Municipal limits. Stilts, Mezzanines and basements shall not be permitted in Matheran Municipal limits. There shall be a total ban on new construction in the Matheran Municipal council area. In areas other than Matheran Municipal area
 - a) There shall be no reduction in the Tribal Area/Forest Zone/Green Zone/Agricultural Zone
 - b) Absolute height of buildings shall not exceed 9 metres and number of storeys shall not exceed ground plus one upper
 - c) Activities mentioned in Annexure-C may be permitted by the monitoring committee subject to State / local rules and regulations.
 - d) Any new construction in other areas of the eco-sensitive zone will require prior approval of the monitoring committee.

(b) Industrial Units: -

- (i) Location of industries shall be only in the designated industrial areas or estates and has to be as per guidelines drawn up by the Government of Maharashtra as well as the guidelines issued from time to time by the Ministry of Environment and Forests.
- (ii) In drawing up guidelines, the Master Plan shall specify the industries that are completely prohibited, those that can be permitted after an appraisal, the requirements and procedures of which are specified, and those that may be permitted provided certain criteria are met which should be specified.

Provided that nothing in these guidelines shall conflict with the provisions of the Environment Impact Assessment Notification of January 27, 1994 of the Central Government and as amended from time to time.

(iii) In future, only non polluting, non hazardous small scale and service industries, floriculture, horticulture or agro based industries producing products from indigenous goods from the eco sensitive zone shall be permitted.

(c) Quarrying and Mining: - Quarrying and Mining activities shall be banned in the Eco-Sensitive Zone. No fresh mining lease shall be granted in the Eco Sensitive Zone. However, the Monitoring Committee shall be the authority to give special permission for limited quarrying of materials required for the construction of local residential housing and traditional road making and maintenance work in Matheran municipal council area only;

Provided that such quarrying is not done on steep hill slopes or areas with a high degree of erosion or on forestlands.

(d) Trees: - There shall be no felling of trees whether on Forest, Government, Revenue or private lands within the Eco-Sensitive Zone, without the prior permission of the State Government in case of forest land, and the respective District Collector in case of Government, Revenue and private land, as per procedure which shall be prescribed by the State Government, provided that the District Collector shall not delegate this power to any subordinate officer below the rank of Sub-Divisional Officer.

(e) Tourism: - Tourism activities shall be as per a Tourism Master Plan, with emphasis on eco-tourism, eco-education and eco-development, to be prepared by the Department of Tourism of the State Government in consultation with the Ministry of Tourism of Government of India and approved by the Ministry of Environment & Forests. The Tourism Master Plan shall also form a component of the Zonal Master Plan. There shall be a ban on new and additional tourist facilities like hotels, restaurants, inns, lodging and boarding houses, etc. within Matheran Municipal council area till the Tourism Master Plan is approved by the Ministry of Environment and Forests.

The Tourism Master Plan shall be based on a detailed Carrying Capacity Study of the Eco-Sensitive Zone which may be carried out by the State Government and submitted to the Ministry of Environment & Forests for approval within 2 years of the date of this Notification. All new tourism activities, developments for tourism/expansion of existing tourism activities shall be permitted only within the parameters of this tourism plan or carrying capacity study. Till the Tourism Master Plan is submitted to Ministry of Environment & Forests for approval, new tourism activities and developments for tourism expansion of existing tourism activities shall be permitted only after a detailed analysis is carried out and approved by the Monitoring Committee subject to guidelines laid down by Ministry of Environment & Forests.

(f) Natural Heritage: - The sites of valuable natural heritage in the zone shall be identified, particularly rock formations, waterfalls, pools, springs, gorges, groves, caves, points, walks, rides etc. and plans for their conservation in their natural setting shall be incorporated in the Master Plan. Strict guidelines shall be drawn up by the State Government to discourage construction activities at or near these sites including under the garb of providing tourist facilities. All the gene pool reserve areas in the zone shall be preserved. The State Government may draw up proper plans for their conservation or preservation within one year from the date of publication of this Notification. These plans shall form a part of the Master Plan.

- (g) **Man-made heritage:** - Buildings, structures, artefacts, areas and precincts of historical, architectural, aesthetical, and cultural significance shall be identified and plans for their conservation, particularly their exteriors (and wherever deemed appropriate their interiors also) shall be prepared and incorporated in the Master Plan within one year from the date of publication of this Notification. Guidelines may be drawn up by the State Government to regulate building and other activities in the Eco-sensitive zone, particularly in Matheran municipal limits, so that the special character and distinct ambience of the town and the eco sensitive zone are maintained.
- (h) Development or construction activity at or around heritage sites (both natural and man-made) shall be regulated in accordance with the Model Regulation on Conservation of natural and man-made Heritage formulated by the Ministry of Environment & Forests in 1995 as amended from time to time and circulated to all State Governments and Union Territory Administrations) or any other statutory provisions of the State Government, whichever is stricter.
- (i) **Ground Water:** - Extraction of ground water shall be permitted only for the bona fide agricultural and domestic consumption of the occupier of the plot. Extraction of ground water for industrial/commercial/residential estates/complexes shall require prior permission from the State Ground Water Board. No sale of ground water shall be permitted except with prior approval of the Monitoring Committee.
- (j) **Use of plastics:** - The Monitoring Committee shall regulate the use of plastics and tetrapacks within the Eco Sensitive Zone. Plastic bags within Matheran municipal limits shall be completely banned.
- (k) **Protection of Hill Slopes:** - The Master Plan shall indicate areas on hill slopes where construction shall not be permitted and there shall be no construction on steep hill slopes or with a high degree of erosion.
- (l) **Discharge of effluents:** - The discharge of any untreated effluent is prohibited within the Eco Sensitive Zone. No effluent, either treated or untreated, shall be permitted to be discharged into any water body/ water source within the zone.
- (m) **Solid Wastes:** - The local authorities shall draw up plans for the segregation of solid wastes into biodegradable and non-biodegradable components. The biodegradable material may be recycled preferably through composting or vermiculture; the inorganic material may be disposed of at environmentally acceptable locations. No burning or incineration of solid wastes shall be permissible within Matheran Municipal Area. It is clarified that the term solid wastes include domestic, industrial, commercial and garden wastes.
- (n) **Natural Springs:** - The catchment area of all natural springs shall be identified and plans for their conservation and rejuvenation of those that have run dry in their natural setting shall be incorporated in the Master Plans. Strict guidelines shall be drawn up by the State Government to ban development activities at or near these areas.
- (o) **Traffic:** - No vehicular traffic shall be permitted within the municipal limits of Matheran, except ambulance and fire engine.

3. Monitoring Committee:

- (a) The Government of India in the Ministry of Environment & Forests shall constitute a Monitoring Committee to ensure compliance with the provisions of this notification. Besides the above provisions of the notification, the monitoring committee shall have the powers to regulate and control noise pollution within the Eco Sensitive Zone. An outstanding/eminent person with sufficient managerial/administrative experience and understanding of local problems shall chair the committee. The Monitoring Committee shall include representative(s) of the Ministry of Environment and Forests, Central Pollution Control Board and at least two representatives of non-government organisations working in the field of environment (including heritage conservation). Collector of Raigad District, Maharashtra shall be a member/convenor. The membership of the committee including Chairman shall not exceed ten.
- (b) It shall be the duty of the Monitoring Committee to file complaints under section 19 of the Environment (Protection) Act, 1986 if offences under the said Act come to its notice.
- (c) The Committee or any officer or member of the Monitoring Committee authorised by the Committee shall be authorised to file complaints under the Environment (Protection) Act, 1986.
4. In exercise of the powers conferred by Sub-section (3) of Section 3 of the Environment (Protection) Act, 1986, read with Section 23 of the said Act, the Ministry of Environment and Forests, Government of India empowers the Monitoring Committee to discharge the functions specifically enumerated in the Notification and to do all things incidental thereto, (except the function as are required to be performed by the Central Government under the provisions of the Environment Impact Assessment Notification of 27th January, 1994 as amended from time to time).

5. Appeal:

- (a) An appeal from any order of the Monitoring Committee shall lie with the Ministry of Environment and Forests: provided that the appeal shall be made within sixty days of date of receipt of the order by the affected person/s, institutions/organisations.
- (b) The Ministry of Environment and forests shall dispose of the appeal within thirty days of date of receipt of the appeal.

Γ

[F.No. J-20011/1/99-I.A.-III]
Dr. V. RAJAGOPALAN, Jt. Secy.



Annexure-BBOUNDARY OF MATHERAN ECO SENSITIVE ZONE

EAST: The road from Karjat in the southeast to the Urbanisable-1 Zone of Badlapur in the northeast via Neral and Wangani.

NORTH: From Badlapur in the northeast to the northernmost limits of Navi Mumbai Municipal Corporation in the northwest, the boundary of the Forest Zone / Green-1 Zone / Green-2 Zone / Quarry Zone with the Industrial Zone / Urbanisable-1 Zone / Urbanisable-2 Zone.

WEST: From the northernmost limits of Navi Mumbai Municipal Corporation in the north-west to Chowk in the south-west, the boundary of the Forest Zone / Green-1 Zone / Green-2 Zone / Quarry Zone with the Industrial Zone / Urbanisable-1 Zone / Urbanisable-2 Zone till the Forest Zone / Green-1 Zone / Green-2 Zone / Quarry Zone meets the Panvel-Karjat railway line in the west-south-west, then along the railway line till the outflow of Morbe Dam and then along the outflow till it meets the Chowk-Karjat road.

SOUTH: From where the outflow of Morbe Dam crosses the Chowk-Karjat road in the southwest to Karjat in the southeast.

From the above bounded Zone: -

- a) The area of Karjat municipality is excluded
- b) In Neral and Wangani the area under the Layout prepared as a part of the final Regional Plan 1973 is excluded

The entire municipal area of Matheran is included.

Note: The classification of zones referred to above is as per the sanctioned Regional Plan of the Mumbai Metropolitan Region, December 1999.

LIST OF VILLAGES OF MATHERAN ECO SENSITIVE ZONEDISTRICT: RAIGADTEHSIL: KARJAT

Sr. No.	Village	
1.	Asai	
2.	Ashane	Partial
3.	Bamnoli	
4.	Bandivali	
5.	Bedisgaon	
6.	Bekare	
7.	Bhadwal	
8.	Bhansoli	Partial
9.	Bhutiwali	
10.	Borle	Partial
11.	Chinchwali	Partial
12.	Damat	Partial
13.	Dhamote	Partial
14.	Diksal	Partial
15.	Garpoli	Partial
16.	Halivali	Partial
17.	Jite	Partial
18.	Kirwali	Partial
19.	Koshane	Partial
20.	Mamdapur	Partial
21.	Mangaon Tarf Waredi	Partial
22.	Matheran	
23.	Neral	Partial
24.	Pali Tarf Waredi	
25.	Savargaon	Partial
26.	Shelu	Partial
27.	Umroli	Partial
28.	Vadavali Tarf Waredi	Partial
29.	Wanjale	Partial

entire municipal area of Matheran is included.

TEHSIL: KHALAPUR

Sr. No.	Village	
1.	Bhilawale	Partial
2.	Borgaon Bk.	
3.	Borgaon Kh.	
4.	Chowk Maniwali	Partial
5.	Hatnoli	Partial

Sr. No.	Village	
6.	Lodhivali	Partial
7.	Morbe	
8.	Nadhal	Partial
9.	Naniwali	
10.	Padaghe	
11.	Pali Bk.	Partial
12.	Sondewadi	
13.	Wad Vihar	
14.	Warose Tarf Wankhal	
15.	Wawarle	Partial

TEHSIL: PANVEL

Sr. No.	Village	
1.	Adai	
2.	Akurli	
3.	Ambhe Tarf Taloje	
4.	Ambhe Tarf Waje	
5.	Ambivali	
6.	Barwai	Partial
7.	Beravali	
8.	Bhingar	Partial
9.	Bhokarpada	Partial
10.	Bonshet	
11.	Borle	Partial
12.	Chal	
13.	Cheravali	
14.	Chikhale	Partial
15.	Chinchavali Tarf Taloje	
16.	Chinchavali Tarf Waje	
17.	Chindharan	
18.	Chipale	
19.	Daharang	
20.	Devad	Partial
21.	Devichapada	Partial
22.	Dhamani	
23.	Dhodani	
24.	Dundre	
25.	Gadhe	
26.	Ghot	
27.	Ghot Camp	
28.	Harigram	
29.	Hedutane	
30.	Kanpoli	
31.	Karambeli Tarf Taloje	
32.	Karavale Bk.	
33.	Kevale	

Sr. No.	Village	
34.	Khairwadi	
35.	Khanav	
36.	Kherane Kh.	
37.	Kondale	
38.	Kondap	
39.	Koproli	
40.	Loniwali	
41.	Machiprabal	
42.	Mahalungi	
43.	Mahodar	
44.	Maldunge	
45.	Moho	Partial
46.	Mohope	Partial
47.	Morbe	
48.	Nagzari	
49.	Nere	
50.	Nevali	
51.	Nitalas	
52.	Nitale	
53.	Pale Bk.	
54.	Pali Bk.	
55.	Pali Kh.	
56.	Penghar	Partial
57.	Poyanje	Partial
58.	Ritghar	
59.	Roadpali	Partial
60.	Sangade	Partial
61.	Sangatoli	
62.	Shilottar Raichur	
63.	Shirvali	
64.	Shivansai	
65.	Shivkar	Partial
66.	Taloje Majkur	Partial
67.	Tamsai	
68.	Tembhode	Partial
69.	Tondhare	Partial
70.	Turbhe	Partial
71.	Umroli	
72.	Usarli Bk.	
73.	Vakadi	
74.	Valap	
75.	Valavali	Partial
76.	Vavanje	
77.	Vihighar	
78.	Wajapur	
79.	Waje	
80.	Wangani Tarf Taloje	

Sr. No.	Village	
81.	Wangani Tarf Waje	
82.	Wardoli	

DISTRICT: THANE

TEHSIL : KALYAN

Sr. No.	Village	
1.	Bhal	Partial
2.	Dhamtan	Partial
3.	Dwarli	Partial
4.	Vadavali Bk.	
5.	Vasar	Partial

TEHSIL: THANE

Sr. No.	Village	
1.	Bale	
2.	Narivali	Partial
3.	Vaklan	Partial

TEHSIL: ULHASNAGAR

Sr. No.	Village	
1.	Ambhe	
2.	Amboshi	
3.	Asode	
4.	Bandhanwadi	
5.	Bendshil	
6.	Bhoj	
7.	Bohonoli	
8.	Burdul	
9.	Chamtoli	Partial
10.	Chikhaloli	Partial
11.	Chinchvali	
12.	Chinchvali Bk.	
13.	Chirad	Partial
14.	Dahivali Tarf Chon	
15.	Dhavale	Partial
16.	Dhoke	
17.	Done	Partial
18.	Goregaon	Partial
19.	Gorpe	
20.	Jambhivali	Partial
21.	Joveli	Partial
22.	Kakadwal	

Sr. No.	Village	
23.	Kakole	
24.	Karavale Kh.	
25.	Kasgaon	Partial
26.	Katrap	Partial
27.	Khard	
28.	Kharvai	Partial
29.	Khuntavali	
30.	Kumbharli	
31.	Kushavali	
32.	Mangrul	
33.	Manjarle	Partial
34.	Mankivali	Partial
35.	Narhen	
36.	Nevali	
37.	Pale	Partial
38.	Pali	Partial
39.	Posari	
40.	Sakharoli	
41.	Sape	Partial
42.	Savaroli	
43.	Shiravali	
44.	Shirgaon	Partial
45.	Tan	
46.	Usatane	
47.	Vangani	Partial
48.	Varade	
49.	Wadi	

Annexure-C

Permissible developmental activities in Matheran Eco-Sensitive Zone

(The classification of zones is as per the sanctioned Regional Plan of the Mumbai Metropolitan Region, December 1999)

1. FOREST ZONE

- 1.1 When any land is situated outside Reserve Forest, Protected Forest, Acquired Forest or Forests as defined as per the Supreme Court's Order dated 12-12-1996; the development of such land shall be regulated in accordance with the provisions for Green Zone-2.

2. GREEN ZONE-2

2.1 The permissible uses in Green Zone-2 (G-2 Zone) are as follows:

- a) Farm buildings for the bona fide use of the holder of any land assessed or held for the purpose of agriculture, to use for the better cultivation of the land. Provided that the area of the agricultural holding is 0.4 ha or more.
- b) Horticulture, floriculture, and, agricultural and allied activities of rice and poha mill, poultry farms, cattle stables, piggeries and sheep farms.
- c) Religious places, crematorium and cemetery.
- d) Schools, pre-primary school and health centre, on plot not less than 0.4 ha.
- e) Clinics and dispensaries.
- f) roads and bridges, railways, dams, pipelines, electricity transmission lines, communication towers.

2.2 The minimum plot size shall be 0.4 ha.

2.3 FSI and Ground Coverage

Permissible Use in 2.1	FSI	Ground coverage
a)	Plinth size of all buildings shall not exceed 150 sq. m.	
b) c) d) e)	0.05	5%

GREEN ZONE-1

3.1 The permissible activities in Green Zone-1 are as follows:

- a) Farm buildings for the bona fide use of the holder of any land assessed or held for the purpose of agriculture, to use for the better cultivation of the land. Provided that the area of the agricultural holding is 0.4 ha. or more.
- b) Holiday resorts and holiday homes.
- c) Educational, medical, social, cultural and religious institutions along with residential quarters and shops for the staff on plots not less than 2.5 ha.

- d) Schools, pre-primary school and health centre, on plot not less than 0.4 ha.
- e) Clinics, dispensaries and health centres.
- f) Storage of LPG cylinders.
- g) Horticulture, floriculture, and, agricultural and allied activities of rice and poha mill, poultry farms, cattle stables, piggeries and sheep farms.
- h) Religious places, crematorium and cemetery.
- i) Parks, gardens, play fields, swimming pools, camping grounds.
- j) Roads and bridges, railways, dams, pipelines, electricity transmission lines and communication towers.

3.2 The minimum plot size shall be 0.4 ha.

3.3 FSI and Ground Coverage

Permissible Use in 3.1	FSI	Ground coverage
a)	Plinth size of all buildings shall not exceed 150 sq. m.	
b) to e)	0.1	10%
Others	0.05	5%

4. URBANISABLE ZONE-2

4.1 The permissible activities in Urbanisable Zone-2 are:

- a) Farm buildings for the bona fide use of the holder of any land assessed or held for the purpose of agriculture, to use for the better cultivation of the land. Provided that the area of the agricultural holding is 0.4 ha. or more.
- b) Houses for residential purposes
- c) Retail shops, whole sale shops, restaurants and banks
- d) Government offices
- e) Schools, pre-primary school and health centre, on plot not less than 0.4 ha.
- f) Clinics, dispensaries and health centres
- g) Non polluting scientific institutions
- h) Garages, petrol pumps, automobile repair workshops
- i) Parks, gardens, play-fields and swimming pools
- j) Cemeteries and crematoria
- k) Horticulture, floriculture, and, agricultural and allied activities of rice and poha mill, poultry farms, cattle stables, piggeries and sheep farms
- l) With the prior approval of the Monitoring Committee, hotels, tourists resorts, holiday homes, motels and club houses
- m) With prior approval of the Monitoring Committee, public services and utility establishment of water treatment plant, sewage treatment plant, solid waste treatment and disposal facilities, electricity sub-station, gas works, fire brigade, police station, telephone exchange, bus shelters, terminals and depots
- n) Roads, bridges, dams, railway lines and related facilities, pipelines, electricity transmission lines and communication towers

4.2 The minimum plot size shall be 2,000 sq. m.

4.3 Permissible FSI shall not exceed 0.2.

4.4 Permissible ground coverage shall not exceed 20%.

5. URBANISABLE ZONE-1

5.1 In preparing the sub-zonal Master Plan for Matheran the recommendations of the report titled Matheran: A Comprehensive Heritage Listing Proposal commissioned by the Mumbai Metropolitan Region – Heritage Conservation Society shall be taken into account.

5.2 The development of lands within the Urbanisable Zone-1 of Neral and Wangani for which no Development Plan, Planning proposal, Town Planning Scheme or Development Control Regulations exist shall be regulated in accordance with the provisions for Green Zone-2.

6. GOATHAN and GAOTHAN EXPANSION

6.1 The following provisions irrespective of Zones shall regulate Gaothan and gaiothan expansion.

6.2 The boundary of the gaiothan shall be as shown in the revenue maps when the Regional Plan came into force.

6.3 Gaiothan expansion is the area within 200 m. from the gaiothan boundary. If more than three-fourths of a plot / sub-plot falls within 200 m. then the entire plot / sub-plot shall be considered as a part of the gaiothan expansion. Land within gaiothan expansion shall be used only for / by the bona fide residents of the gaiothan.

6.4 The lands in gaiothan may be used for any of the following purposes:

- a) Residential
- b) Retail shops, restaurants, banks, hair-cutting saloons, flour mills, ration shop, bicycle repair shops and automobile repair shops
- c) Schools
- d) Community centres and other social institutions
- e) Religious places
- f) Clinics, dispensaries and health centres
- g) Essential public services and utilities including local Government offices
- h) Stables for domestic animals subject to limit of 5 animals on each plot
- i) Traditional household industries
- j) Storage of crop, fodder, manure, agricultural implements and other similar needs
- k) Parks, gardens and playgrounds
- l) Public conveniences

- m) Storage of fuels for domestic and commercial purposes like hotels, restaurants and guesthouses.

6.5 FSI and Ground Coverage.

Area	FSI	Ground coverage
Gaothan	1.00	—
Gaothan expansion	0.40	40%