

## What is F.A.R. ?

- The floor area ratio (F.A.R.) is the principal bulk regulation controlling the size of buildings. F.A.R. is the ratio of total building floor area to the area of the plot.
- For example, if a plot measures 25 cents (approx. 10886 sq.ft) and the F.A.R. permissible for that area is 2, then a maximum of 21772 sq.ft of space will be permitted to construct in all floors of the building put together.
- Town Planning Schemes mandates different F.A.R. values for different areas. The F.A.R. value, when multiplied with the Plot area gives us the maximum floor area that can be constructed for a building in the plot. This is subject to satisfying other conditions such as Parking, setbacks, access width etc.

## Why F.A.R. is used?

- Various **tools** are used by for regulating or guiding the development of our urban areas. The primary objective of using such tools is the optimal utilisation of precious land considering its *use, reuse, misuse, disuse and abuse*.
- Among various development regulations adopted, **Floor Area Ratio (F.A.R.)** is one of the most important one, which regulates the bulk of the built space. Higher the F.A.R. value, more will be floor area within the same plot, and higher the pressure on land for infrastructure. Carrying capacity and development priorities assigned by the plan to each locality are the major factors which decide F.A.R. that can be permitted in an area.
- F.A.R. values mainly determine the **density** or **intensity of development** of an area. Hence different F.A.R. values are prescribed for different locations in development plans.
- In brief; the permissible F.A.R. values are decided in relation to different inter-related aspects such as adequacy of water supply, sewerage system, solid waste disposal, road capacity, land availability, harmony with surrounding developments and other facilities, amenities and services.
- In other words, F.A.R. is a very **crucial regulation**, which decides the intensity of development in an area and hence highest care is required in fixing its maximum allowable limit in different areas. It is high time for us to think about the **Implications of F.A.R. on the development of our developing cities like Kochi**.

**Like any structure, the city has the ability to take a safe load, beyond which the stress and strain will increase and reach the breaking point. It is this safe load factor, which in other words we call the F.A.R.**

## How will a high F.A.R. value affect a metropolitan city like Kochi?

- Higher the building activity in a settlement, greater is the need to guide developments prescribing F.A.R. for ensuring **sustainable development**. Our cities are the engines of economic growth and Kochi is the only Million-plus urban agglomeration in Kerala. All of us want our cities to sustain their potential in the years to come.
- The infrastructure situation in the major cities of Kerala are not very rosy. We all know that our cities by-and-large have been growing organically. Due to our scattered settlement pattern, sluggish population dynamics and characteristic socio-economic scenario, we never had a situation, where we could go for **large scale land acquisition** for new-towns or large-scale urban extensions as in the case of other cities like Bangalore, Chennai, Delhi, Hyderabad etc.
- The planning strategy for the development of cities in Kerala are by and large to **guide the developments** in the desired directions and **plan corrective steps**. The holding capacity of different parts of our cities cannot be compared with these cities and hence their F.A.R. values.
- In Indian cities, the maximum F.A.R. values hover around 2.0 or 2.5. There is perhaps no metropolitan city in India, where high F.A.R. beyond the above said limits is applicable to the entire city region, irrespective of location.
- What will be the **impact of F.A.R. as high as 4 in our major cities?** Say for Residential occupancies? Such an F.A.R. may even lead to densities crossing **One Lakh persons per square kilometer!** Now **imagine** this density in different pockets in Kochi.
- To examine the infrastructure deficiencies in our major cities, take the **'roads'** as an example. This is an area of **concern** in urban Kerala. Many of us have experienced the **'level of service'** of our 'lanes' in cities, which aspire for high rise – high intensity developments!
- Compared to other metropolitan cities in the rest of India, the **widths** are relatively very low in **all hierarchy of roads** in our cities. Take the example of Ernakulam District. Even though the growth of population is relatively low (only 10% in the decade 1991-2001), the **automobile explosion**, is of **great concern with an astonishing 250%!**
- Among the prospects for augmentation of city infrastructure, **width of roads** poses the **biggest headache**, as it is highly deficient; and prospects for improving the same is limited due to **sky-rocketing prices and great hardships in procuring land to widen it to even the minimum standards!**

# REMEMBER:

**1**

**F.A.R. as such, will not hinder high-rise developments. But, a reasonable F.A.R. mandates adequate open area in a plot for high-rise buildings. This is for the benefit of the occupants of the building, their neighbours and the public at large.**

**2**

**If we go on increasing the F.A.R., the land value will also proportionately increase.**

**3**

**The prices of flats will not come down on account of increase in F.A.R. alone.**

**4**

**Land is definitely precious and scarce. So, the land and F.A.R. have to be judiciously used, not abused. Increasing the F.A.R. unscrupulously is definitely not the prescription for meeting the housing demand for the increasing population.**

**5**

**By increasing the F.A.R., the common man may not be able to afford decent shelter. Increase in F.A.R. will only increase the land value, since the buildable space per unit area of land increases.**

**6**

**No investor will have a sustained interest in an over-crowded and choked city, with falling infrastructure. If only F.A.R. values are optimum, the growth the city will sustain and will continue to attract more and more employment-generating projects to our cities.**

**7**

**Construction sector creates employment opportunity. But it cannot unduly promoted by increasing FAR to unreasonable limits, sacrificing the bright future of our cities and well being of the citizens. Regulations like F.A.R. intended for guiding the city to a better future should not be viewed as an obstacle.**

**8**

**Compared to the provisions in the original Structure Plan for Kochi, F.A.R. values were increased to the extent possible in the published draft zoning regulations.**

THERE ARE SOME  
**MISCONCEPTS**

ABOUT

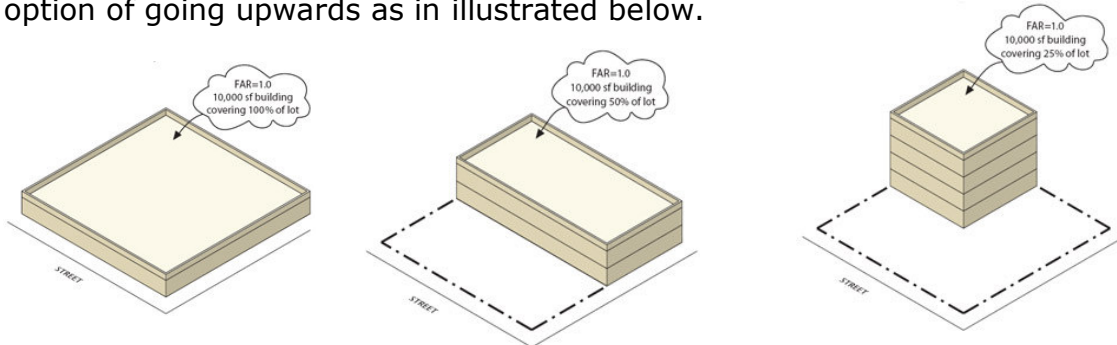
**F.A.R.**

Let us examine them one-by-one.

**X MISCONCEPT -1**  
**If F.A.R is low, we cannot go for high-rise development**

**Absolutely wrong.** You can still go for vertical development. But, more the floor, greater will be space to be left open. This will also help in **ensuring adequate space around the building**, which will take care of the light and ventilation of the residents of the building as well as those around.

Take the example of a 10,000 square-foot plot with a maximum F.A.R. of say, 1.0. The floor area of a building cannot exceed 10,000 square feet. But you have the option of going upwards as in illustrated below.



If your neighbours go for high-rise buildings, it should not be at the **cost of your light and ventilation**. If he do so, he should leave sufficient space open, so that you are not suffocated. This problem assumes great concern in a city like Kochi, where the tendency to go for maximum use of land (far beyond the optimum) is much more.

**REMEMBER:** F.A.R. as such, will not hinder high-rise developments. But, a reasonable F.A.R. mandates adequate open area in a plot for high-rise buildings. This is for the benefit of the occupants of the building, their neighbours and the public at large.

**X MISCONCEPT -2**  
**Land value is high and is Sky-rocketing. Hence F.A.R. has to be increased considerably.**

**X MISCONCEPT -3**  
**If F.A.R. is increased, prices of Flats will come down.**

These are **out-dated** arguments. If F.A.R. is increased, the Floor space that can be built also increase, which in practice is found to shoot up the land practices. It will lead to unending demand for continued increase in F.A.R.

For example; if F.A.R. is 1, the maximum buildable space in a plot of say 50 cents will be **21,700 sq.ft.** Suppose, the Government increases the F.A.R. to 2.0 on the on the argument that the land value is high. This means that, in the same plot of 50 cents, the buildable space will double to **43,400 sq.ft.** The same 50 cents plot is now worth double the original value. This will result in doubling the land value on account of the increased F.A.R. If the F.A.R. is further increased to say 4, on account of this hike in land value, the buildable space will increase to **86800** sq.ft, which will make the land value four times the original land value.

Is it not foolish to increase F.A.R. on the ground that the land value is high? Every unimaginative increase in F.A.R. will make the land un-affordable to more and more people. Do we want to make our cities affordable to only the affluent?

**REMEMBER:**      **If we go on increasing the F.A.R., the land value will also proportionately increase. The prices of flats will not come down on account of increase in F.A.R. alone.**

#### **MISCONCEPT -4**

**X Land is precious and scarce; hence F.A.R. has to be increased considerably to house the exploding population.**

Land is definitely precious and scarce. It has to be **judiciously** used, not **abused**. We must respect the realities. Each area in a city has its own carrying capacity. F.A.R. decides the bulk of built space. It should not be increased without serious thought.

The population growth in our cities is not that serious. Even for Ernakulam district, the population growth is only 10% a decade (1991-2001). For Kochi Corporation area, it is only 5.6%. But the automobile growth for the district is a staggering 250%!! Just imagine what will be the vehicular density after 20 years? Imagine the situation where the built space is exorbitantly increased on account of raising permissible F.A.R. values in all areas of our cities? Can we widen all our lanes and roads in cities to accommodate this traffic? Can we improve all the city-infrastructure to that level?

Increase in F.A.R. beyond reasonable limits, will increase pressure on land, create over-crowding & congestion and result in deficiency in facilities and utilities. This may lead to unhealthy environment and chaos.

#### **REMEMBER:**

**Land is definitely precious and scarce. So, the land and F.A.R. have to be judiciously used, not abused. Increasing the F.A.R. unscrupulously is definitely not the prescription for meeting the housing demand for the increasing population.**

**X MISCONCEPT - 5**  
**If F.A.R. is not increased, the common man cannot afford a decent shelter.**

Every increase in F.A.R. will result in a proportional increase in land prices. If the increase is beyond optimal limits, the land value will rise above the affordable limits of the common man as already discussed under 'Misconception No:3'. Do we want to see staggering increase in squatters and slums in near future? Will the private housing developers effectively take care of the shelter needs of the economically weaker sections and lower income groups? Are the developers also interested in meeting their demand?

**REMEMBER:** Increase in F.A.R. will only increase the land value, since the buildable space per unit area of land increases.

**So, by increasing the F.A.R., the common man may not be able to afford decent shelter.**



### **MISCONCEPT - 6**

**X** **If F.A.R. values are not increased considerably, major projects like I T Parks will not come in the city.**

Major projects should come and more employment should be generated. But they should become assets we would be proud of, not burdens to the city and its residents. We must encourage projects, which generate and sustain employment. But permitted value of F.A.R. has to take care of the ground realities of the infrastructure situation.

We must also check which project is suited to us. All that glitters are not gold. Our cities should not get choked and fail to keep their development tempo, just for the short time monetary gains of a few. The developments should come, but not at the cost of the city's bright development future. We have examples of employment-generating projects in Kerala and outside the state, which are functioning successfully and still expanding with reasonable F.A.R. values.

#### **REMEMBER:**

**If only F.A.R. values are optimum, the growth the city will sustain and will continue to attract more and more employment-generating projects in our cities.**

**After all, no investor will be attracted by an over-crowded and choked city, with falling infrastructure.**

### **MISCONCEPT - 7**

**X Housing industry in private sector is giving employment to many. Very high F.A.R. can improve the employment opportunities in this sector.**

All developments in the city will have their physical manifestation. Construction activity is one among them. It is true that the sector is creating employment opportunity. However, regulations like F A R intended for guiding the city to a better future should not be viewed as an obstacle. Simply because the sector is creating employment opportunities, any haphazard or undesirable developments, cannot be advocated in that name, which may mar the bright future of the city.

We must strive to create employment opportunities, but shall we sacrifice the future of our cities for short time gains? If our cities become unimpressive for investment due to haphazard developments and congestion, will the employment generation in the construction front sustain? We can bend, but never attempt to break! Let constructions come, create employment opportunities, but they shall adhere to the F.A.R. prescribed if any in Town Planning schemes.

#### **REMEMBER:**

**Any sector creating employment opportunity, cannot be unduly promoted to any extent, sacrificing the bright future of our cities and well being of the citizens.**

**Regulations like F.A.R. intended for guiding the city to a better future should not be viewed as an obstacle.**

## MISCONCEPT - 8

**X F.A.R. values were reduced considerably, when the Structure Plan for Kochi was revised.**

Please compare the zoning regulations of the original and revised Structure Plan provisions yourself.

Sl. No:	Area	F.A.R. Values as per Structure Plan Zoning Regulations		
		Existing	New (draft published)	Remarks on F.A.R.
<b>General</b>				
01	Agricultural use area	1.00	1.50	Increased by <b>50%</b>
02	Residential Use zones (R-75, R-150, R-300, R-450)	1.25 to 1.50	2.00	Increased by <b>33 to 60%</b>
03	Commercial Use Zones (C1& C2)	2.00	2.00	Remains the <b>same</b>
04	Industrial (M1 & M2)	1.00 to 2.00	1.25 to 2.00	An increase upto <b>25 - 33%</b>
05	Public & Semi-Public (P1 & P2)	1.50	2.00	Increased by <b>33%</b>
<b>Area Specific</b>				
06	Selected corridors of the Central Business District*	1.0 to 2.00	1.00 to 2.00	Remains the <b>same</b> except for two areas, where the values increased by <b>4%</b> and <b>33%</b>
07	On both sides of NH, selected arteries and roads having width 12m or above* # (to depths as prescribed in the plan)	Absent (1.00 to 2.00 depending on the general regulations for the respective zones)	2.25	An effective increase of <b>11 to 125%</b>
08	Large scale development projects which create 500 or more direct employment. * #	Absent (1.00 to 2.00 depending on the general regulations for the respective zones)	2.00	An effective increase which may extend upto <b>100%</b>

\* Please visit the website [www.townplanning.kerala.gov.in](http://www.townplanning.kerala.gov.in) to see the notification publishing the draft zoning regulations for Kochi Central City for further details.

# These are new regulations introduced, which were absent in the original sanction Plan.

### **REMEMBER:**

**Compared to the original provisions in the Structure Plan for Kochi, F.A.R. values were increased to the extent possible; in the published draft revised zoning regulations.**

**More the F.A.R, more will be the profit; so it may not satisfy all the land owners and developers. Kindly consider various aspects already discussed above and understand the limits.**

**The growth of our cities like Kochi should sustain in the decades to come; it should not burst out like a bubble.**