

NCHSEBPL < nchsebpl@gmail.com >

Fri, 22 May 2026 11:54:34 AM +0530

To "advbbpa"<advbbpa@traai.gov.in>

Cc "jtadvbbpa-1"<jtadvbbpa-1@traai.gov.in>,"TRAI Bhopal"<traibhopal@gmail.com>

To,

**Dr. Abdul Kayum,
Advisor (BB&PA), TRAI**

Dear Sir

The comments on the consultation paper on the subject from NCHSE, Bhopal (CAG) are given below for consideration

Q1 What are the key supply-side constraints affecting Public Wi-Fi proliferation in India? What targeted policy or regulatory measures may be required to address these supply-side constraints? Please provide your response in detail with justification.

Ans1: Lack of coordination between state and local bodies and service providers. There must be a single aim to extend the WI-FI facility to the end point and for this Nodal officer should be declared by the state government for a district and the collector of the district would be most suited for this job. Under his/her chairmanship all concerned heads and service providers must meet on a monthly basis and discuss the constraints which they are facing in achieving the target. Regular supply of power to remote areas is necessary in helping to achieve the target and therefore the head of power must be one of the members in the committee.

Q2 What are the major demand-side constraints limiting the uptake of Public Wi-Fi services in the country? What targeted policy or regulatory measures may be required to address these demand-side constraints? Please provide your response in detail with justification.

Ans 2: Unaware of the WI-Fi services availability, their advantage and how to get such service by rural population and remote areas re theL major constraints from the demand side. To address these constraints TSP/ISPs are very important. If they allow WI-FI free for a limited period we think people may go to avail this facility and once they realize the benefit, they may go further to continue to take the advantage of WI-FI.

Q3 Despite the PM WANI initiative, scaling the number of public hotspots across diverse geographies, especially in remote and underserved regions, remains uneven. What are the key challenges in expanding both the density and geographic

spread of hotspots, and what strategies could help accelerate more balanced, nationwide coverage? Please provide your response in detail with justification.

Ans 3: Security, privacy and trust deficit are the main reasons for uneven expansion of PM WANI. IF we talk area wise it is more in rural areas in comparison to urban areas. Development of infrastructure in remote areas is also one of the major concerns. If we see the challenges ahead, the first thing is to develop confidence amongst users about security and privacy of data and side by side the importance of PM WANI, its utility and advantage too. We have to see if P.D.O will get a free environment to develop an uninterrupted data supply. The role of TSP/ISPs can not be overlooked for a speedy expansion of infrastructure. Delicensing policy in rural and remote areas may give boost to develop at faster speed.

Q4 What changes, if any, are required in the existing PM-WANI framework to improve revenue certainty and long-term sustainability for PDOs/PDOAs? Please provide your response in detail with justification.

Ans 4: At present to get PM WANi wifi various steps to follow , on the APP is downloaded, there should not be any bottleneck to get the data and moreover recharge vouchers should be easily available. If such a system is developed, the revenue will automatically improve.

Q5 Are there any other challenges currently faced by PDOAs/PDOs? If yes, what changes can enhance the participation of entrepreneurs under the PM-WANI framework? Please provide your response in detail with justification.

Ans 5: Low public awareness is still a main challenge faced by the P.D.O/P.D.O. As and if such bottle neck is removed by way of establishing a confidence amongst users then there will be faster growth power P.D.O/P.D.O. As even in remote areas.

Q6 Are there improvements needed in the Authentication, Authorization, Roaming, and Payment architecture of the PM-WANI Framework? Please share suggestions, if any. Please provide your response in detail with justification.

Ans 6: Yes there is a need for improvements in authentication . For authentication there are various steps to perform before login whereas in mobile network users do not have. Such bottlenecks should be removed and once the login is done there should not be further logging in the case moving to another area. Lack of public awareness is also to be addressed and for that media can play an important role.

Q7 In the Indian context, which of the following models would be more appropriate for the proliferation of Public Wi-Fi?

- a. A model where the Government actively ensures hotspot deployment through direct funding and implementation support, including backhaul provision; or
- b. A model where the Government primarily ensures availability of robust backhaul infrastructure and intervenes in hotspot deployment only in cases of market failure.

Please provide your response in detail with justification.

Ans 7: We think that model 'A' will be more appropriate for proliferation if of Public WIFI. The activity participation of the government will be a common policy throughout India. Keeping in view the present development of public Wi-Fi in

urban rural and remote areas policy can be laid down without any bottleneck and hope it will take faster development and uses of public WI-FI

Q8 Is there a need to adopt separate strategies for Public Wi-Fi proliferation in rural and urban areas? If yes, suggestions may be provided. Please provide your response in detail with justification.

Ans 8: There is greater need to adopt separate strategies for public WI-FI proliferation in rural urban and remote areas also. System has to focus more attention to rural and remote areas where proliferation of public Wi-Fi has not reached to that level which it would be. Since the Government is actively participating in the development of the system. Can deploy resources where needed and can also help TSP/ISP for development of infrastructure.

Q9 What measures can be taken to improve the deployment and uptake of Public Wi-Fi networks in high-footfall areas for both outdoor (such as bus stops, roadside transit points, open public parks, markets, tourist sites), and indoor (such as airports, railway stations, malls, public institutions)? Please provide your response in detail with justification, separately for outdoor and indoor scenarios.

Ans 9: In an outdoor scenario where development has already taken place, the government should allow the service providers to use the government future at a cheaper rate for installation of the system so that the public may get public WI-FI facilities without any interruption. But in indoor scenarios, the government must direct the concerned authorities of different institutions to provide public WI-FI facilities and take media help in popularizing the benefit of public WI-F and availability usage.

Role of Government- Funding deployments

Q10 If the Government decides to provide financial support for the proliferation of Public Wi-Fi, which funding mechanisms would be most suitable for India? Should a uniform funding mechanism be adopted nationwide, or should differentiated funding mechanisms be used for rural, urban, and high-footfall areas? Please provide your response in detail with justification.

Ans 10: Since the development of Public Wi-Fi and its usage are not uniform in urban, rural, and high-footfall areas, the funding mechanism should also not be uniform. In urban areas, local bodies already support and have comparatively developed infrastructure. In rural areas, the conditions are quite different due to low usage, lack of awareness about public Wi-Fi, and less developed infrastructure. In high-footfall areas, the situation is even more challenging. Therefore, the government funding mechanism for these areas should be different. The government needs to take special care of rural areas, which cover approximately 70% of the total population.

Q11 What criteria should govern the allocation and disbursement of funds across rural, urban, and high-footfall areas, respectively? Please provide your response in detail with justification.

Ans 11: In urban areas, the class of the city (Smart City, Class A, B, or C city) and population density should be the main criteria for funding. In rural areas, the level of infrastructure development and population-to-area ratio should be the primary criteria. For high-footfall areas, since the population density is lower though the area covered is large, a common funding approach can be adopted.

Role of Government- Backhaul provisioning and funding

Q12 Is the lack of adequate and reliable last-mile connectivity a critical constraint for the proliferation of Public Wi-Fi in the country? If yes, what specific measures may be considered by the Central Government, State Governments, and local bodies to address the last-mile constraints? Please provide your response in detail with justification.

Ans 12: Yes, we do agree that connectivity to end points is a major constraint for the proliferation of Public Wi-Fi, especially in rural and remote places. To overcome this constraint, the Central Government should allocate special funds to State Governments, and then it will be the responsibility of the State Governments to allot funds to local bodies according to the specific conditions of the area, not on a pro-rata basis. Thereafter, it will be the responsibility of the local bodies to utilize the funds in the right direction, keeping in view the development of infrastructure. Efforts should also be taken by the local bodies to ensure uninterrupted power supply.

Q13 Is there a need for the Government to provide funding for provisioning of last-mile connectivity in the uncovered or underserved areas for Public Wi-Fi networks? If yes, which funding option is best suited in the Indian context, and what should be the criteria for rural, urban, and high footfall areas, respectively? Please provide your response in detail with justification.

Ans 13: We think that Government funding is required for the provisioning of last-mile connectivity in uncovered areas for Public Wi-Fi networks. Most cities have specific funding in their budget to develop Wi-Fi networks. In Class A cities, private service providers have already undertaken such work to develop Public Wi-Fi. However, urban areas of Class B and C, rural areas, and high-footfall areas still require support. The funding criteria should be based on the density of population and development of the network.

Facilitative role- States and local bodies

Q14 Are there any RoW challenges faced by service providers in accessing public places or street furniture to install Public Wi-Fi hotspots? If yes, details may be provided along with suggestions for improvements. Please provide your response in detail with justification.

Ans 14: We do not think that the service providers are facing ROW challenges.

Q15 What facilitative roles can State Governments play in accelerating Public Wi-Fi deployment across rural, urban, and high-footfall areas, respectively? Should States consider deploying Public Wi-Fi networks at the municipal and gram panchayat level? Please provide your response in detail with justification.

Ans 15: The State Government should play an important role in accelerating Public Wi-Fi deployment, guiding TSP/ISPs for installation of Public Wi-Fi hotspots, and identifying street furniture for installation of Public Wi-Fi hotspots etc. In urban areas where infrastructure is already developed. In rural areas the State Government should provide funding for the development of infrastructure to local bodies, especially at the gram panchayat level. With regard to high-footfall areas, the State Government, with the help of local people, should undertake the development of infrastructure and Public Wi-Fi hotspots.

Q16 Should the State Government need to take initiatives to improve the availability of last-mile connectivity for Public Wi-Fi networks? If yes, what measures can incentivise States /municipalities to undertake city- and town-level fiberisation to ensure Public Wi-Fi network proliferation? Please provide your response in detail with justification.

Ans 16: Yes, the State Government should take initiatives to improve the availability of last-mile connectivity for Public Wi-Fi networks. Guidance should be provided to TSPs/ISPs in cities and developed towns, while funding should be provided to less-developed towns for fiberisation to ensure Public Wi-Fi network proliferation.

Q17 What facilitative roles can local bodies play in accelerating the deployment and sustainable operation of Public Wi-Fi networks in rural and urban areas? Please provide your response in detail with justification.

Ans 17: In the consultation paper, the role of local bodies has been very well defined. In addition to that, especially in rural areas, the local bodies can play an important role in educating people about the benefits of Public WiFi and informing them where such facilities can be availed in the area. They can also guide the service providers in the development of infrastructure for Public WiFi networks in their area.

Incentivising Service Providers

Q18 What regulatory or policy incentives, schemes or programs are required to promote active participation of TSPs and ISPs in Public Wi-Fi deployment? Please provide your response in detail with justification.

Ans 18: If the TSPs and ISPs involved in Public WiFi deployment achieve the set targets within the allotted time, incentives in terms of their share of income or share in Government revenue for the sector can be considered. This may help TSPs and ISPs achieve the allotted targets well before the stipulated time, thereby enabling rapid development of infrastructure as well as deployment of Public WiFi.

Q19 What regulatory or fiscal incentives, schemes or programs may be required in the provisioning of bandwidth and backhaul for Public Wi-Fi networks? Please provide your response in detail with justification.

Ans 19: Fiscal incentives can be considered for achieving the targeted Public WiFi networks.

Incentivising Private entities

Q20 What measures can be adopted to incentivise private enterprises, commercial establishments, shop owners, community institutions etc. to install public Wi-Fi hotspots? Please provide your response in detail with justification.

Ans 20: The rent for the space occupied by the Public WiFi system in private enterprises, commercial establishments, shop owners, community institutions, etc., can be considered as an incentive. Once this system is accepted, there is every possibility that such establishments may become more popular through the Public WiFi facility, which may also help increase their income.

Q21 Is there a need to strengthen the role of public or private entities as system integrators for the deployment of Public Wi-Fi networks? If yes, what policy or

institutional support may be required? Please provide your response in detail with justification.

Ans 21: There is a greater need to strengthen the role of public and private entities as system integrators for the deployment of Public WiFi networks. For this, the Government can and should take a leading role in coordinating their efforts and, at times, provide valuable suggestions and guidance for the deployment of Public WiFi networks.

Technical Architecture, Authentication, and Interoperability

Q22 Are users facing challenges in the authorization and authentication procedures for accessing Public Wi-Fi Networks? If yes, how can authorization and authentication processes be simplified while ensuring security and compliance? Please provide your response in detail with justification.

Ans 22: We do not think that users face significant challenges with the authentication and authorization procedures for accessing Public WiFi networks.

Q23 Is there a need for a centralized platform for authentication and payment systems in the Public Wi-Fi ecosystem? If yes, which entity is best suited for its implementation and management? Please provide your response in detail with justification.

Ans 23: There is a need for a centralized platform for authentication and payment systems, and for that, the Department of Telecommunications (DoT) would be the best platform.

Q24 What steps are required to achieve interoperability and seamless roaming among Public Wi-Fi networks? Should inter-hotspot roaming be made mandatory, and if yes, should a “super-aggregator” need to be introduced to facilitate it? Please provide your response in detail with justification.

Ans 24: We would like to add that there are no further comments to offer. However, inter-hotspot roaming should be made mandatory, and once this is implemented, only one-time authentication and authorization should be required.

Monetisation and Sustainability

Q25 What monetisation models are most appropriate for rural, urban, and high-footfall locations, respectively? Please also suggest any additional monetisation models that may be suitable in the Indian context. Please provide your response in detail with justification.

Ans 25: For rural areas direct revenue the community-led model will be more suitable and for indirect revenue enablement of digital public services. In case of urban areas, paid access model and bundled WiFi by TSPs can be considered as direct revenue and support for smart city and IOT services can be considered as for indirect revenue. High footfall locations, Freemium model for direct and for indirect mobile data offload benefits model will be suitable.

Q26 Please provide any additional comments, observations, or suggestions related to the proliferation of Public Wi-Fi in the country, including any potential issues or considerations that may not have been covered in the sections above. Please provide your response in detail with justification.

Ans 26: We have the following comments for consideration in fast proliferation of Public WI-Fi Networks.

A. Media. can play a significant role in expansion of Public WI-FI.

B. In rural areas very few are aware about Public WiFi and if they know what are the benefits of Public WiFi; they are not aware, so wide publicity is required.

C. In the publicity there should be specifically mentioned what are the benefits of Public WiFi and to how it is better as compared to mobile network.

D. With regard to charges/tariffs it must be lower than that of mobile data and if possible this should be included in publicity material.

E. Regular power supply is one of the important aspects in fast development of Public WiFi. In rural areas power shut-down is a common feature. Care has to be taken of this sector also.

With Regards.

R.Chandra

Sr. Fellow & CAG member



National Centre for Human Settlements and Environment

E-5/A, Girish Kunj, Arera Colony, Bhopal

Madhya Pradesh- 462016

Ph.001 755 2466731, 4093376

<http://www.nchse.org>