

PRESS RELEASE



CSIR-National Institute of Science, Technology and Development Studies (NISTADS)



Improved Air Quality through Virtual Attendance at Work and School (VAWS)

(A CSIR-NISTADS Mission Delhi- Initiative)

The question that is haunting perhaps every citizen of NCR is life with odd-even numbering for traffic restriction. Does Delhi have a choice?

Yes, Delhi has a choice. CSIR-NISTADS has worked out a non-disruptive, sustainable mitigation solution, with a carefully thought out implementation strategy. The major source of air pollution in a metropolis like Delhi is vehicular traffic. While the atmospheric circulation and precipitation act as natural and regular sinks, through advection and deposition, they have limits due to various dynamical and seasonal effects. Quite expectedly, the pollution peaks as the week progresses due to accumulation. Thus, a break or reduction in traffic, even for a day, would enable the natural circulation to clear the air.

Such a break in traffic can be now affected non-disruptively through IT-enabled work/school scheduling especially in large metros where there is good infrastructure and access. We propose a 2+1+2 working week in which the third day (Wednesday) will be a day of **Virtual Attendance at Work and School (VAWS)**, with two regular working days before and after. A mechanism of internal monitoring will be in place. This would allow spike of the air pollution to subside during mid week.

In addition to reducing air pollution, VAWS will have several other attending benefits like energy saving at work/school, reduction of travel related stress, higher efficiency and improved quality life. VAWS can easily be implemented and monitored through an organised system.

A critical success factor is that VAWS should be implemented and synchronized for offices and schools. The solution is shown to be sustainable and non-disruptive without any adverse effects and can be easily replicated in other metros. We do not propose VAWS as an OFF day; rather an employee must be available in station and must report for duty at office in case of an emergency. To maintain transparency, accountability and objectivity, the record of work assigned and completed on the day of virtual attendance can be placed on institutional/school web portals.

With an effective IT infrastructure, like email, internet and mobile telephone, VAWS is implementable for Delhi and other metros as well. While solutions like alternative, Odd-Even Number (OEN), may provide a temporary solution, it may also have several adverse effects. While the concept of Work from Home (WFH) is not new, its design and formulation in several countries lacked certain essential features. VAWS provides a **policy solution to mitigate air pollution in a Mega City through Non- Disruptive work scheduling**, which can be implemented easily, without adverse effects, but with significant socio-economic benefits (Appendix A). Preliminary estimates show the benefits to be significant.

Appendix- A

Comparative Analysis of two Mitigation Measures for Reduction of Air Pollution

S.No.	Parameter/Process	VAWS (Virtual Attendance at Work/school)	OEN (Odd-Even Number)
1	Implementation	Immediate and Total	Phased and disruptive
2	Effectiveness	Both cars and school buses	Only cars
3	Sustainability	Not effected by increase in vehicles	Becomes ineffective, vehicles keep increasing
4	Acceptability	Optional but welcome	May lead to discontent
5	Quality of life	Enhanced quality time	May create stress
6	Productivity	Increase	Decrease
7	Implementation Process	Non-disruptive	disruptive
8	Cost Saving	Positive	Negative
9	Education Quality	Enhance through self studies	May result in teacher/student absence
10	Monitoring and Enforcement	Not required	Difficult and burdensome
11	Associated Benefits	Decrease in related traffic like taxi, auto	Nil, may lead to mal practices
12	Energy	Effective saving at office/school	No Saving
13	Working Hours	Effective increase	No Change
14	Economics	No extra burden	Extra Burden
15	Health	Less exposure time to Pollution	Same Exposure time
16	Capital Investment	Nil	Large capital & maintenance investment.
17	Scalability	Easy; easier with advances in IT.	Nil
18	Control	Easily withdrawn when pollution level decreases.	Large investments become redundant.