

2nd Session

Group of Expert on Level Crossing Safety
12th – 13th May, UNECE, Geneva, Switzerland



Efforts of Indian Railway
to reduce
Level Crossing Accidents

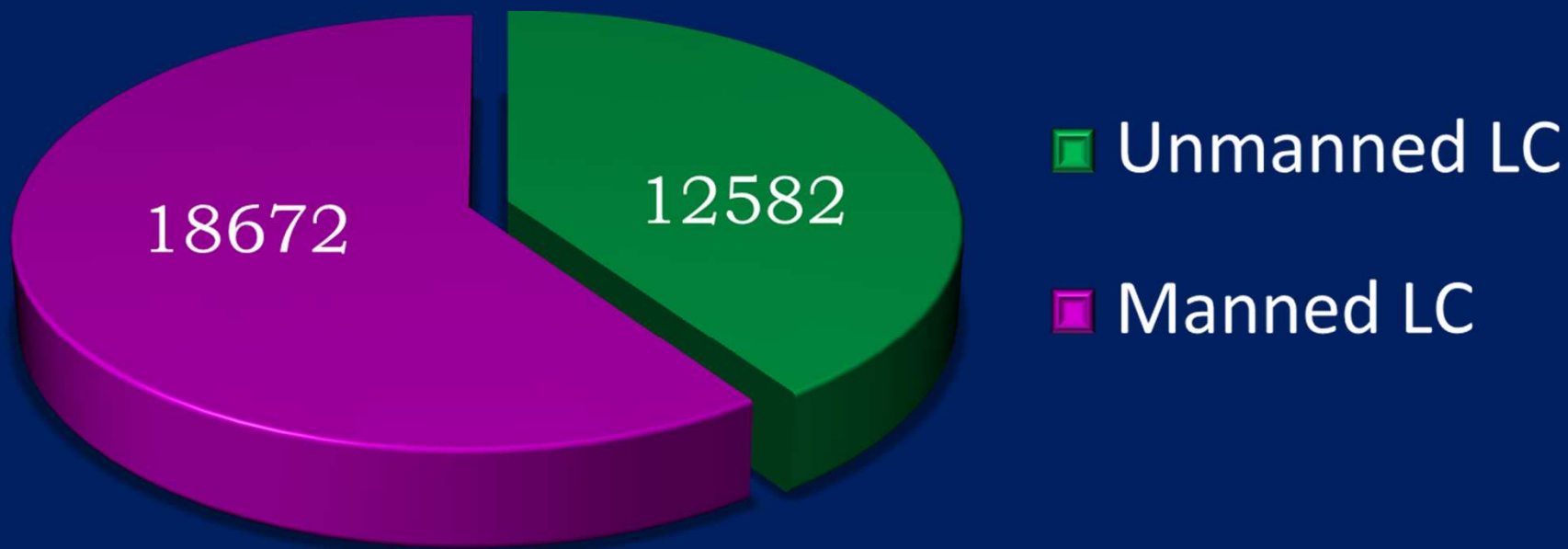
*Safety Directorate, Ministry of Railways,
Government of India , New Delhi*

Indian Railway Network



- ❖ No. of Railway System : 16 Zonal Rly
- ❖ Staff directly Employed : 1.3 Million
- ❖ Route Kilometer : 64,600 KM
- ❖ Block Station : 7000 Nos

Number of Level Crossings on IR (Manned & Unmanned : As on 1st Apr'2013)



Total Number of Level Crossings (Manned & Unmanned) are **31254 Nos.*

**There are no GUARDED-Unmanned Level Crossing on Indian Railway unlike European Countries. Cheap and robust solution are to be found for this.*

LEVEL CROSSING ACCIDENT ON IR

*Currently Indian Railway has 64600 route Kilometers and carries about 23 million passengers per day. Through painstaking effort the **index of accident** per “Million Train Kilometer” has been brought down from **0.44 in 2003** to **0.14 in 2013**. In spite of these achievements, the incidences on level crossings contributes to **41% of all train accidents**, accounting for **63% deaths and 33% injuries***

ACCIDENTS ON LEVEL CROSSING ON IR (As on 01.04.2013)

Year	Accidents On Manned LC	Accidents On Unmanned LC	Total Accidents (MLC+UMLC)
2000-2001	11	73	84
2001 - 2002	8	80	88
2002 - 2003	14	82	96
2003 - 2004	9	86	95
2004 - 2005	5	65	70
2005 - 2006	10	65	75
2006 - 2007	7	72	79
2007 - 2008	12	65	77
2008 - 2009	7	62	69
2009 - 2010	5	65	70
2010 - 2011	5	48	53
2011 - 2012	7	54	61
2012-2013	5	53	58
Total in 12 Yrs	105	870	975

REPURCUSSION ON LEVEL CROSSING ON IR (As on 01.04.2013)

Year	Manned LC			Unmanned LC			MLC+UMLC		
	Killed	Injured	Casualty	Killed	Injured	Casualty	Killed	Injured	Casualty
2000-2001	16	15	31	138	152	290	154	167	321
2001 - 2002	14	29	43	163	197	360	177	226	403
2002 - 2003	76	94	170	147	193	340	223	287	510
2003 - 2004	12	8	20	138	147	285	150	155	305
2004 - 2005	9	7	16	173	197	370	182	204	386
2005 - 2006	6	13	19	120	124	244	126	137	263
2006 - 2007	11	8	19	146	156	302	157	164	321
2007 - 2008	27	43	70	148	144	292	175	187	362
2008 - 2009	18	54	72	129	142	271	147	196	343
2009 - 2010	7	6	13	170	150	320	177	156	333
2010 - 2011	7	12	19	130	98	228	137	110	247
2011 - 2012	6	11	17	204	141	345	210	152	362
2012-2013	18	23	41	121	69	190	139	92	231
Total in 12 Yrs	227	323	550	1927	1910	3837	2154	2233	4387

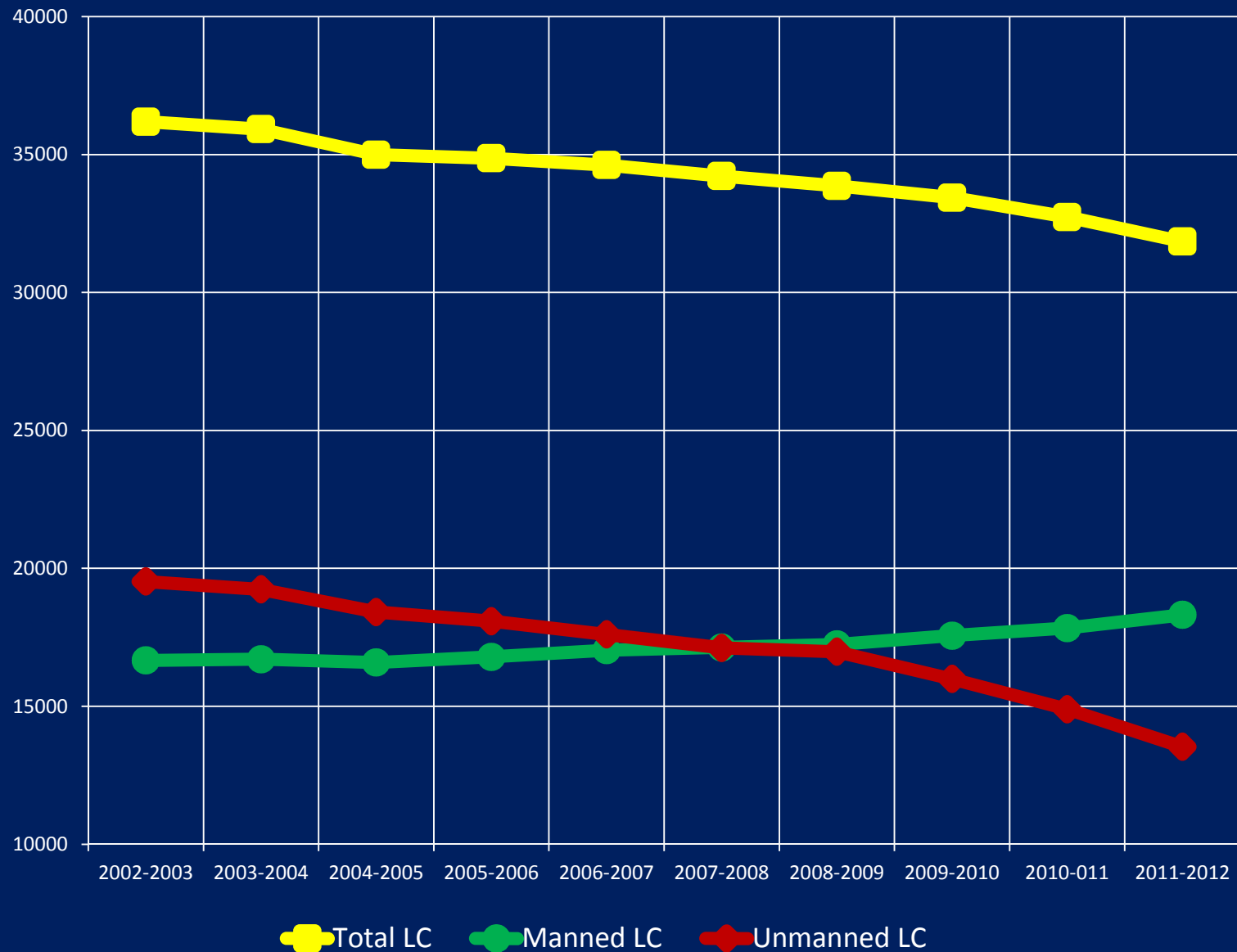
LEVER CROSSING CONFLICTS: MAJOR CAUSE OF ACCIDENT ON IR

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ELIMINATION OF LEVEL CROSSING

- **VISION 2020** : Elimination of all unmanned level crossing within a time frame of five years.
- **Method of Elimination of Level Crossing**
 - Road Over Bridges: high TVU LC (>0.1 Million)
 - Road Under Bridges At Bank
 - Merger/Diversion To Adjacent LC
 - Closure Of Low TVU LC
 - Manning Of Unmanned LC
- **Bottleneck**
 - ROB: Land Acquisition , Encroachment removal
 - RUB: Technical Feasibility
 - Closure: Permission from Government, Public Outrage
 - Manning: Manpower Requirement

No. of LC-Decreasing Trend



Working on Five Es :Engagement, Education, Engineering, Enforcement and Economics

- ❖ Indian Railways always pioneered in implementation of the Five Es (*Engagement, Education, Engineering, Enforcement and Economics*) through various means, brief of which is given below.
- ❖ **1).Engagement:** NGOs, R&D Organisations and Engineering College have been engaged to tackle the issue of LC Accidents.
- ❖ **2).Education:** Indian Railway launches regional and nation wide safety campaigns to improve awareness of road users time to time through distribution of Hand Bills, Sticking of Posters, sending SMS, delivering Safety messages at public events, in public places, shops, cinemas, advertisement on media like newspaper, Radio, Street Shows, Morning Walks, Cultural Programs etc. Apart from this the lessons on level crossing safety has been included in school syllabus and safety park has been established.

Working on Five Es :Engagement, Education, Engineering, Enforcement and Economics

- ❖ **3).Engineering:** Engineering Technology is made use of to develop various safety systems on level crossings, like double lifting barrier, electrified boom, LED Signals etc. Cable Stayed Road Over Bridges are being provided at major busy railway yards. R&D is being promoted in collaboration with academic institutions and business houses.
- ❖ **4).Enforcement:** Enforcement is ensured through consistent monitoring/implementation of legislation provided in law (*Motor Vehicle Act/Indian Railway Act*) related to use of level crossing. Crossing of tracks at unauthorised locations is made a punishable offence. Safety Checks are conducted with association Traffic Police(RTO), Railway Police(GRP & RPF), NGOs and penalty is imposed on defaulters.
- ❖ **5).Economics:** Works of elimination of unmanned level crossings are funded by *Prime Minister/Chief Minister/Member of Parliament Development Fund, Village Road Scheme* and from Petrol/Diesel Cess.

Number of Unmanned LCs Eliminated in last five years (2008-2013)

Year	By Closure/ Merger/Subway	By Manning	Total
2008-09	556	259	815
2009-10	553	377	930
2010-11	800	434	1234
2011-12	481	777	1258
2012-13	700	463	1163
TOTAL	3090	2310	5400*

**After elimination of above 5400 Level Crossings, there are still 12582 Nos (As on 01.04.2013) of Unmanned Level Crossings which poses threat of loss of human life .*

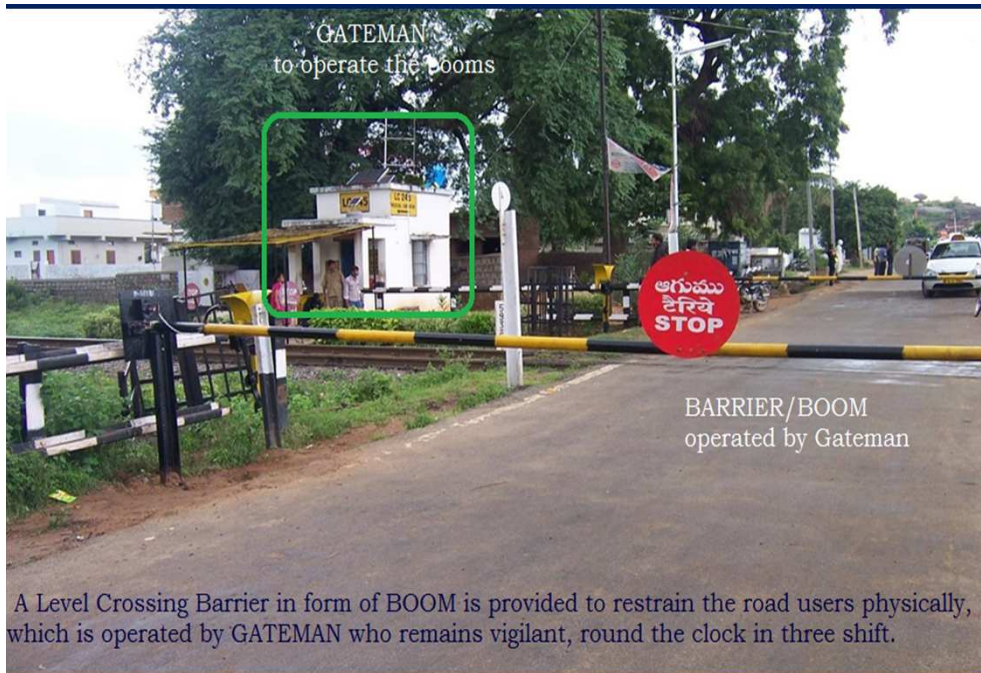
Number of UMLC planned for Elimination during the 12th Five Year Plan (2012-2017) by IR.

Items	2013-14	2014-15	2015-16	2016-17	Total
CLOSURE of Low TVU LC	173	309	218	207	907
MERGER to nearby LC/RUB/ROB	203	377	366	360	1306
ROB by Road Under Bridge Construction	476	1286	1272	1390	4424
RUB by Road Over Bridge Construction	5	18	17	15	55
MANNING of Unmanned LC	495	936	814	871	3116
TOTAL	1352	2926	2687	2843	9808*

*Total number of UMLC(as on 01.04.2013) is **12582** and out of this 9808 have been planned for elimination. Balance 2774 UMLC has not been planned, being on different Gauge (Meter Gauge/Narrow Gauge) and will be taken up during Gauge Conversion as per the Uni-gauge Policy of Ministry of Railway.*

UNECE's 67th Session of Working Party on Road Traffic Safety and ESCAP at IRTE, Faridabad, India, 4th to 6th December 2013



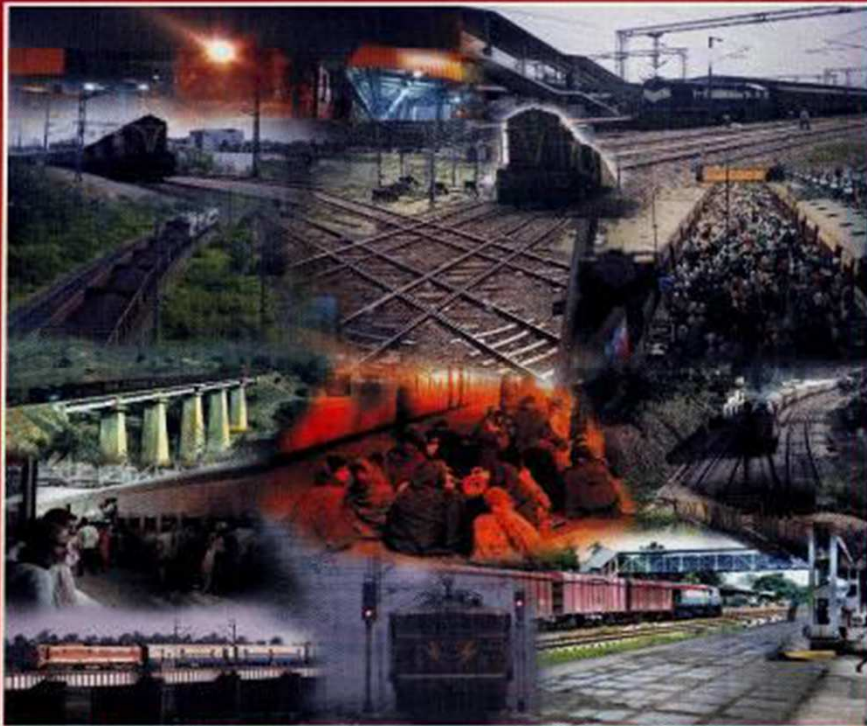


INNOVATIVE POSTERS AT LC – Deep Impact as
Reported in Forbes Magazine, India



<http://forbesindia.com/article/work-in-progress/how-unmanned-level-crossings-spell-danger/34303/1#ixzz2mfhfROSp>

Publication of LC Safety Leaflets



UNMANNED

Remember, all vehicles are under statutory obligation to follow the rules under Section 131 of Motor Vehicles Act, 1988 and Section 161 of the Indian Railways Act, 1989 regarding negligently crossing unmanned level crossings. Violation shall be punishable with imprisonment, which may extend to 1 year.

MANNED

Violation of rules regarding opening/breaking of gates in case of manned level crossings, is a punishable offence under Section 160 of the Indian Railways Act, 1989, which prescribes imprisonment for a term extending to 3 to 5 years.



South Eastern Railway
Rail Safety is no accident

SAFETY RULES FOR MANNED & UNMANNED RAILWAY CROSSINGS



South Eastern Railway
Rail Safety is no accident



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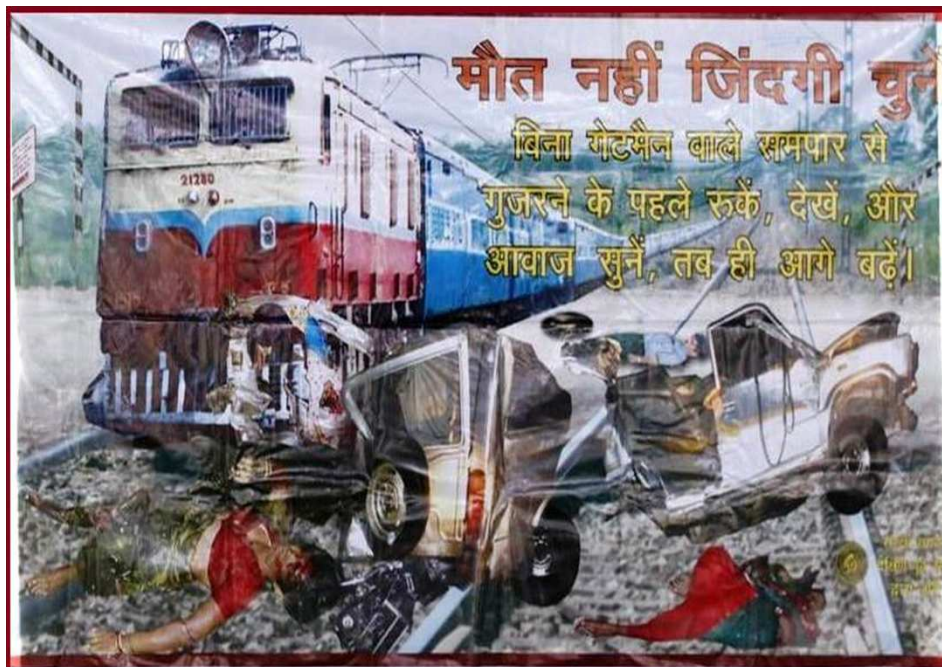
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ઇન્ટરનેશનલ લેવલ કોસિંગ અવેરનેસ ડે ની ઉજવણી માટે ફિલ્મ શો અને નુકકડ નાટક યોજાયા

વડોદરા તા. ૧૧

ભારતીય રેલવે દ્વારા ઇન્ટરનેશનલ લેવલ કોસિંગ અવેરનેસ ડેની કરવામાં આવી હતી. ઉજવણીના ભાગરૂપે ફિલ્મ અને નુકકડનું નાટક બતાવવામાં આવ્યું હતું.

વડોદરા રેલવે ડિવિઝનમાં આવેલા ૧૧૬૪ ફાટક પૈકી ૭૨૮ રેલવે ફાટક ફાટકમેન વિનાના છે. રેલવે સત્તાધીશો દ્વારા આ ફાટકમેન વિનાના રેલવે ફાટક પર કર્મચારીઓની નિમણૂક કરવામાં ઝાઝી રસ દેખાડ્યો નથી. જોકે તેઓ દ્વારા ફાટકમેન વિનાના રેલવે ફાટક પર અકસ્માતના સર્જાય કે પછી ફાટક બંધ હોય ત્યારે રેલવે લાઈન કોસ કરતા વ્યક્તિઓમાં જાગૃતતા આવે તે માટે

૭મી મેના રોજ ઇન્ટરનેશનલ લેવલ કોસિંગ ડેની ઉજવણી કરવામાં આવે છે. જે માટે રેલવે દ્વારા ૧૫ ટીમો બનાવવામાં આવી છે. આ ટીમો દ્વારા લોકોમાં જાગૃતતા આવે તે માટે ૧૧૫ રેલવે કોસિંગ પર જઈ રાહદારીઓ અને વાહનચાલકોને અકસ્માતના સર્જાય તે માટેના પગલાં લેવાનું માર્ગદર્શન આપ્યું હતું. જેમાં ૧૧૦૦૧ રાહદારીઓનો સમાવેશ થાય છે. જ્યારે આ અંગેની જાગૃતતા માટેના ૩૦૪૮ સ્ટિકર ૬૩૩૫ હેન્ડબિલ વેચવામાં આવ્યા હતા. જ્યારે પાવીજેતપુર તાલુકાના જબુગામ, કુકણા અને સુસકાલમાં ફિલ્મ શો યોજવામાં આવ્યો હતો.



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