





VGCB – Vedanta Ports

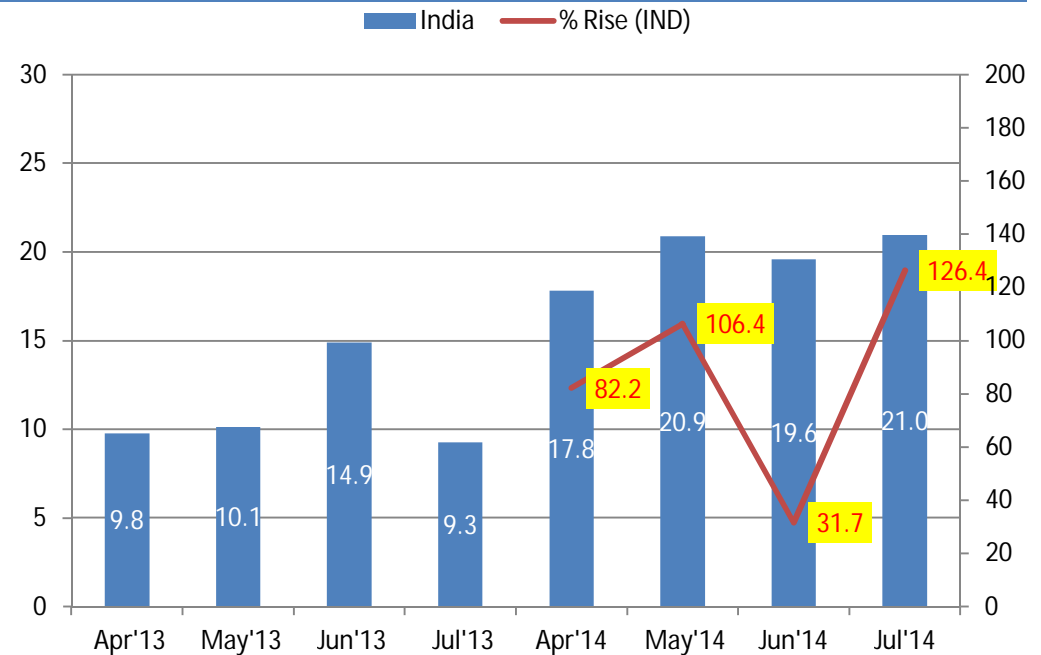
Vishakhapatnam Port- Corridors of Growth -Rail Connectivity to
Hinterland for Imported coal

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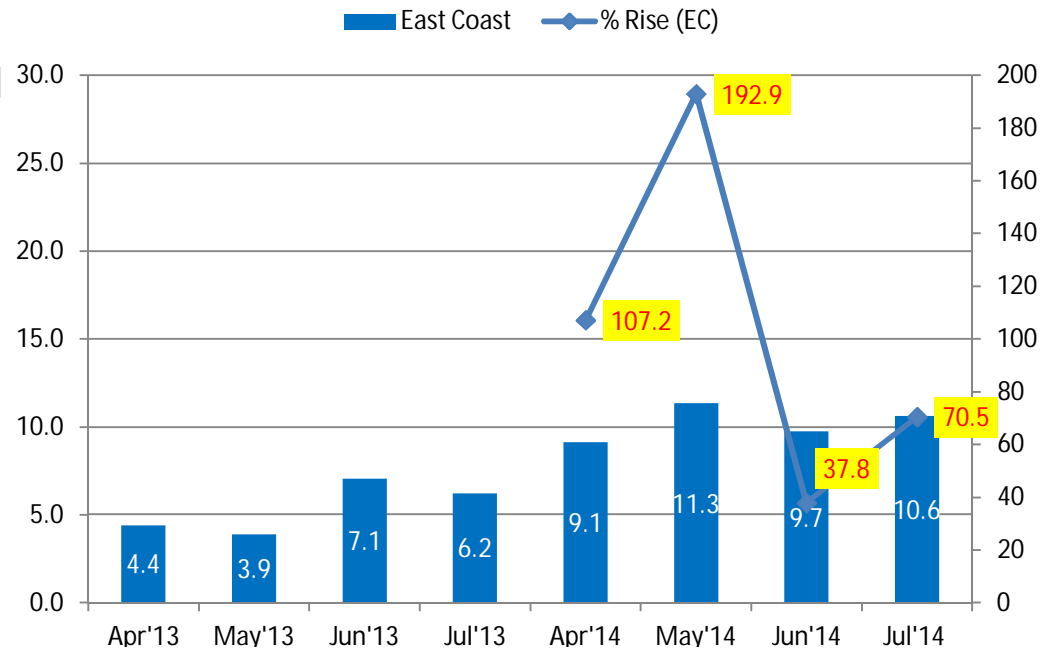
Highlights:

- Imported coal (14-15) : 168 Mt.
- Coal imported as compare to same period of last year (13-14):
 - EC: 41 Mt against 21.6 Mt (102% )
 - IND: 79 Mt against 44 Mt (87% )
- FY15-16 :Expected import = approx 220+ MMT
- Major rise on a/c of :
 - Cancellation of coal blocks
 - Auction/linkage coal qty reduction.
 - Limited production by CIL.
 - Capacity addition- Nil.
 - Low international coal prices.



Lowlights:

- Inadequate port infrastructure to support Coal throughputs:
Avg pre berthing delays = 10-15 days.
- Storage space scarcity at port.
- **Mismatch between Import- Evacuation - railway infrastructure like**
 - Line doubling
 - Line electrification
 - Unavailability of freight corridor.
 - Limited diesel locomotive.
 - Unavailability of sufficient rakes.
 - Increase in railway traffic due to

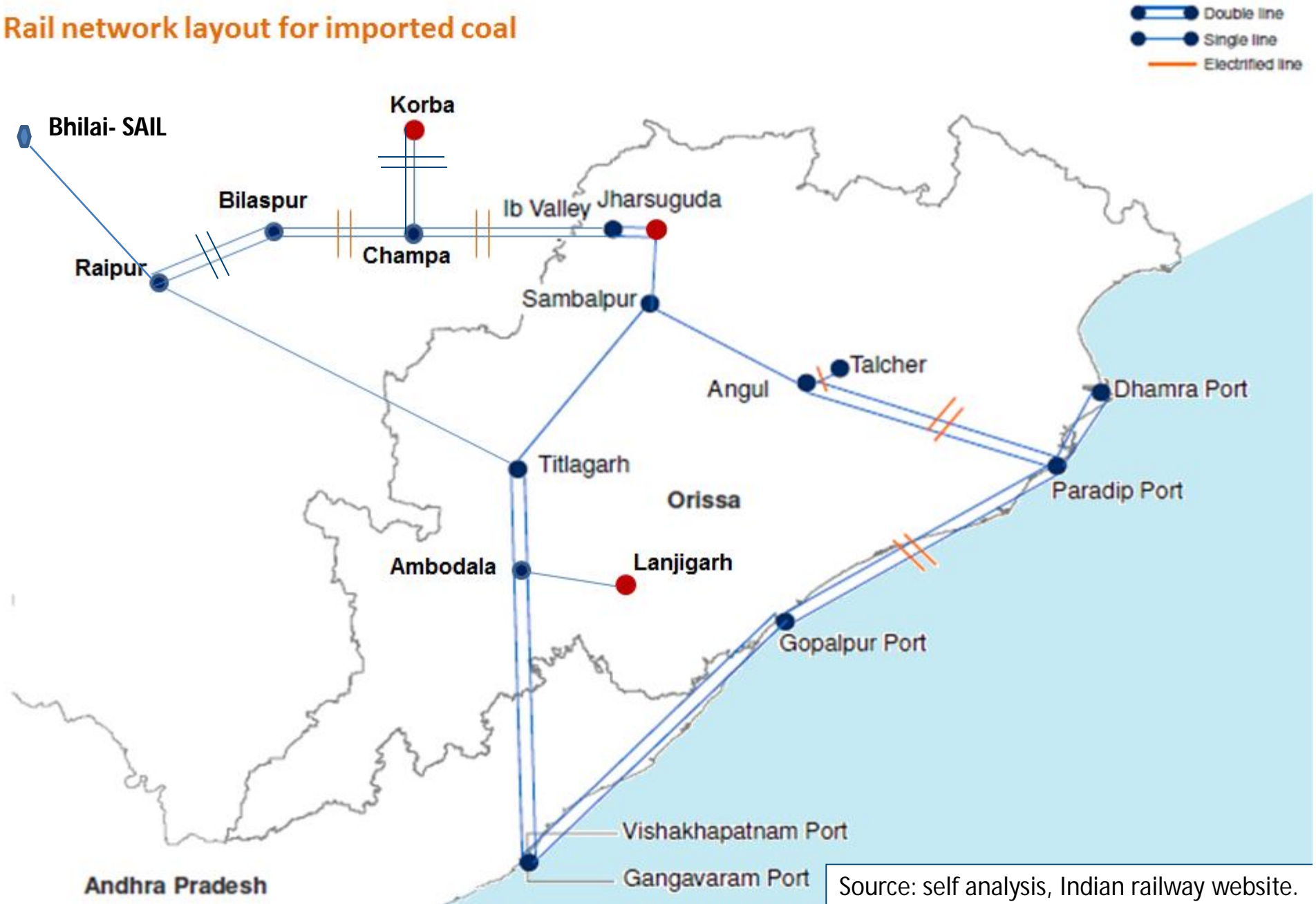


Traffic increase due proximate industries



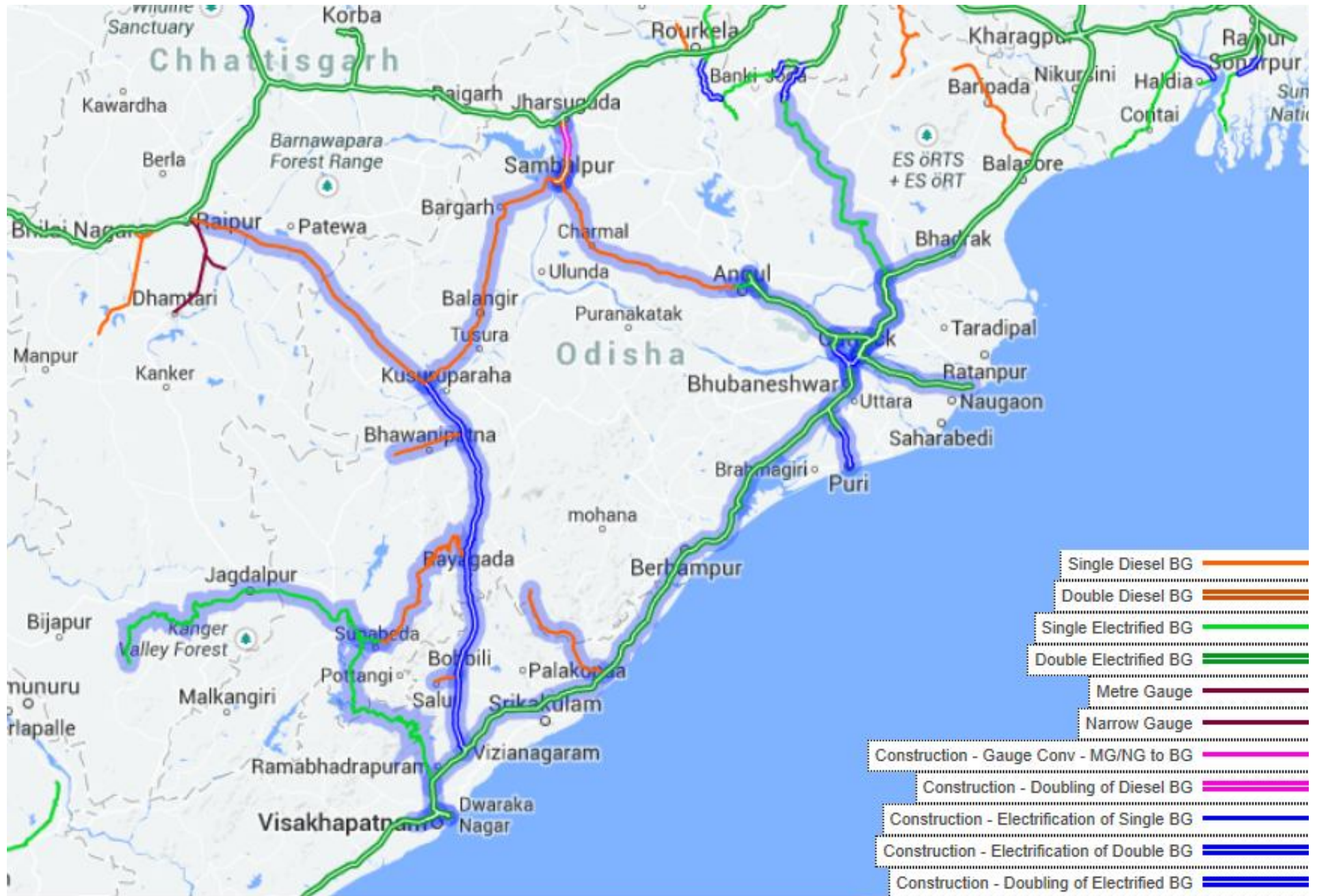
Vizag Ports - Railway network connectivity to Hinterland

Rail network layout for imported coal



Source: self analysis, Indian railway website.

Vizag Ports – Railway tracks & electrification



Railway line circuit from East Coast ports to plant

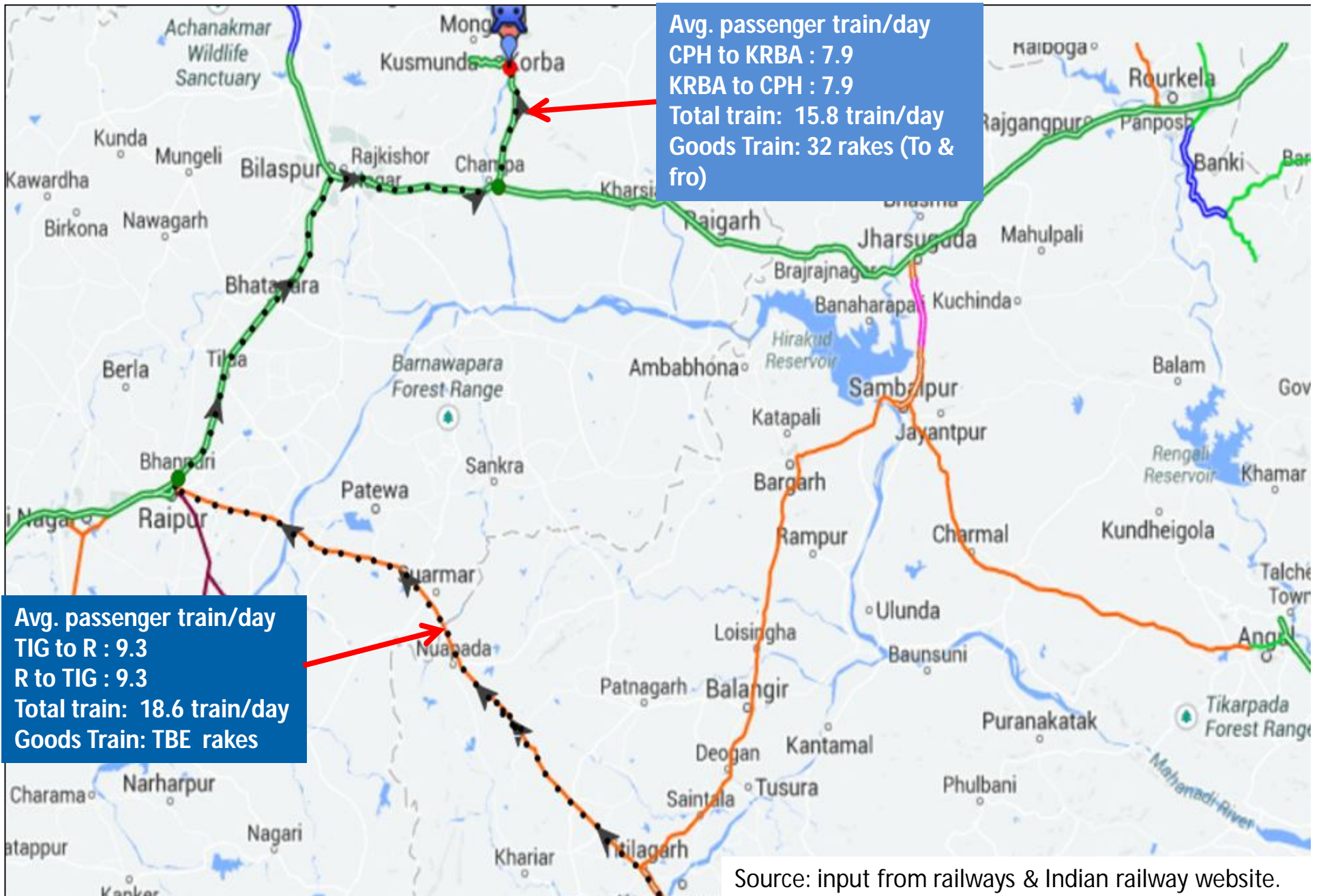


Rail connectivity-Capacity utilization of rail tracks on ECoR



Source: self analysis, input from railways & Indian railway website.

Rail traffic in BALCO network from port



Vizag Port's Hinterland-Traffic on rail network for JSG

What is the maximum capacity on these lines?

Total train at SBP
From TIG: 32.6
From ANGL: 30.4
Total train handled/day: 63

Avg. passenger train/day
SBP to JSG: 15.3
JSG to SBP : 15.3
Goods Train: 16
Total Trains : 46.6 train

Avg. passenger trains/day
TIG to SBP : 10.3
SBP to TIG : 10.3
Goods Train: 12
Total train/day : 32.6

Avg. passenger train/day
ANGL to SBP : 9.4
SBP to ANGL : 9.4
Goods Train: 12 rakes
Total train/day: 30.4

1. Vizag Port - Long distance from port = 730 km from VGCB/GPL- Better Infrastructure
2. Paradip = 600 km (but delays - draft limitations ,Old infrastructure ,long anchorage, no storage space).
3. Poor evacuation of coal - High storage cost – port congestion -Average transit time is 4 to 5 days.
 - Port – on need of power /loco & examination of BOXN rakes after loading.
 - Frequent Route restriction ,slow movement from rakes from Tiltagarh to Raipur due to single line. RV line route congestion
 - Raipur Railway Yard –Delays on account of change in loco from diesel to electric- 2 hrs to change loco- only 10 rakes can have interchange.
 - Raipur - Champa is on Mumbai – Howrah main route where passenger train is given priority.
4. Typical difficulties by end users : To complete the circuit BALCO require 6 to 7 rakes. (4 to 5 in transit, 1 loading at port & 1 unloading at plant).
5. Change in railway division from ECoR to SECR. Due to which BOBRN availability is concern. As per ECoR BOBRN going to SECR cannot returned within stipulated time or not returned. Therefore BOBRN not been allotted to SECR (BALCO) .

Challenges

1. Lengthy & Tiring micro level execution to increase TAT via
 - Robust railway liasoning even @ micro level for rake availability, loco availability, in route expediting, BOBRN availability etc.
 - Constant coal supplies are not assured

Current dispatches for BALCO (0.7 rake/day) = 80 KT/month.

Asking rate: 1.75 rakes/ day

Challenges:

1. Currently there are 6 major thermal power plants in Orissa (incl VAL & SEL),
2. Increase in railway traffic due to incorporation of other industries in nearby area like BSPL, Aditya Aluminium, Hindalco (hirakund), NTPC (kanhia & simdari) & other small industries.
3. Other commodities & finished goods moving through same route.
4. Coal movement primarily originates from six sources – i.e. 2 MCL mines and 4 ports. Coal for all industries is supplied from these sources only.
5. RV Line – Titlagarh –Raipur & Titlagarh- Sambalpur sections critical section to coal movement .
6. Rise in coal import due to E-auction reduction & cheaper international coal. Resultant availability of rake is concern (100% rise of coal import in east coast as compare to last year till July'14)
7. In route congestion and limited rake allotment due to rake allotment for linkages at Talcher.
8. Power Sector-Increase in NTPC & SAIL rakes likely, again with higher priority on IR.
9. 35-40% increase in coal traffic from Talcher and IB valley mines by 2017.

Challenges:

1. Lengthy & Tiring micro level execution to increase TAT via
 - Endless railway liasoning even @ micro level for rake availability, diesel loco availability, in route expediting specially @ Vizag - availability of crew guard at sambalpur etc.
 - Micro level liasoning & execution to be done for faster materialization.

Current dispatches including both port (1 rake/day) = 110 KT/month.

Asking rate: 2 rakes/ day for 220 KT/Month

Vizag Port - Advantages Vs Other Ports

Ports	VPT-VGCB	Paradip	Dhamra
Draught (m)	18.2M	14.68	18
Max. Vessel capacity	Cape size (150 KT)	Post panamax (90 KT)	Cape size (150 KT)
Distance (kms)	560	402	475
Transit time	2 days	1-2 days	2-3 days
Bottlenecks	<ul style="list-style-type: none"> • At vizyanagram for diesel loco. • Titlagarh – sambalpur (single line) • Change of power at Raipur Diesel to Electric 	<ul style="list-style-type: none"> • At port for electric loco • Angul & Talcher road. • Angul to Sambalpur (Single line) • At Sambalpur 	<ul style="list-style-type: none"> • Port to Bhadrak (Single line) • At Bhadrak – for electric loco. • In transit to Angul • Angul to Sambalpur (Single line) • At Sambalpur.
Reasoning for slow TAT	<ul style="list-style-type: none"> • Allotment of Diesel power at port. • Limited availability of diesel loco at Talchar in route. • Shortages of crew guard. • Route connection 	<ul style="list-style-type: none"> • Allotment of electric power at port. • Limited availability of diesel loco at Talchar in route. • Shortages of crew guard. 	<ul style="list-style-type: none"> • Allotment of electric power at port. • Limited availability of diesel power at Talchar in route. • Shortages of crew guard.

Railway infrastructure	Present Utilization	Demand	Gap
Coaching: 22 Goods :18 Dept :03 TTL :45 Diesel Power : 65	Coaching : 24 Goods : 20 Dept : 03 TTL : 47 Diesel Power : 65	Coaching: 26 Goods :40 Dept :03 TTL :69 Diesel Power : 84	24 Rakes 53% Diesel Power : 19
Coal Cargo movement on RV line	20 Rakes 0.75 LacMT/Day	44 Rakes 1.5 Lac MT/Day	0.75 Lac MT/Day 100%
Rough estimated Revenue Generated	41 lcs Rs/Rake x 20 rakes 7.5 Cr/Day	41lac Rs/rake x 40 rakes 16.5 Crs/Day	9 Cr/Day 3285 Cr/PA
Loss to end users (vessel demurrage and cargo storage at port)	200 Rs/MT On a conservative side		Delay in supply : 10 days Unreliable supply chain-Very high inventory cost. Loss of production Many a plants are under utilized
Loss to Terminal/BOT Operator/Ports	<ul style="list-style-type: none"> BOT/ Terminal Operator Poor evacuation 	<ul style="list-style-type: none"> Port : Under utilization of capacity by 30%-40%. Not able to serve clients 	

Railways:

1. **Vishakhapatnam Port's core supply-route connectivity- RV line.**

- Vizaynagram to Titlagarh : 220 KM : Electrification to be taken at war footing – completion by end of present Financial year FY 15-16.
- Titlagarh – Raipur : Doubling of line + Electrification on this line :
- Titlagarh – Jharisugada Line: Doubling of pending 20KM of line + Electrification of route
- Until then: increase railway Diesel Power from present available : 65 Nos to required 84 nos.
- Rake Availability : VPT 20 Rakes Vs 8 Rakes + Neighboring ports : 13 Rakes=33 Rakes
- Until the tracks are congested Railways to use alternative route to clear rakes – ensure timely supplies to end user.

Vizag Port :

1. Rake detention time at R&D yards of about 7 to 8 hrs to be reduced by at least 60%.
 - Increase Port power from present 6 nos to 10 nos- to handle increased cargo.
 - Develop 2nd Out let for evacuation of loaded rakes -Mindi yards – Present R& D yard is over burdened .
 - Electrification of Port rail net work
 - Based on reduced TAT and better performance- BOT operators to be allocated higher number of rakes

Thanking you