



**MOMENTUM
JHARKHAND**

The investment destination
GLOBAL INVESTORS' SUMMIT 2017
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FOREST, ENVIRONMENT AND CLIMATE CHANGE



झारखण्ड सरकार

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Advantage Jharkhand



- Ranked 1st in Labor reforms and inspection related compliances in India^[1]
- Endowed with 40% of India's mineral wealth. Leading producer of steel, coal, mica and copper in India (1st rank in coal, 2nd rank in Iron Ore, Apatite rock 3rd phosphate, Cobalt, Silver Ore and 3rd rank in Copper, Graphite)
- Man days lost due to industrial strife lowest in India & Long history of industrial harmony^[2]
- 1st in country to have SWAN under NeGP and CSC in rural areas^[3]

10.5% GSDP^[4] growth rate - Second fastest in Eastern India^[5]

Ranked 5th Foreign Direct Investment FDI destination in India^[6]

Ranked 7th in "Ease of Doing Business" in India in 2016 with an Evaluation score of 96.57%^[7]

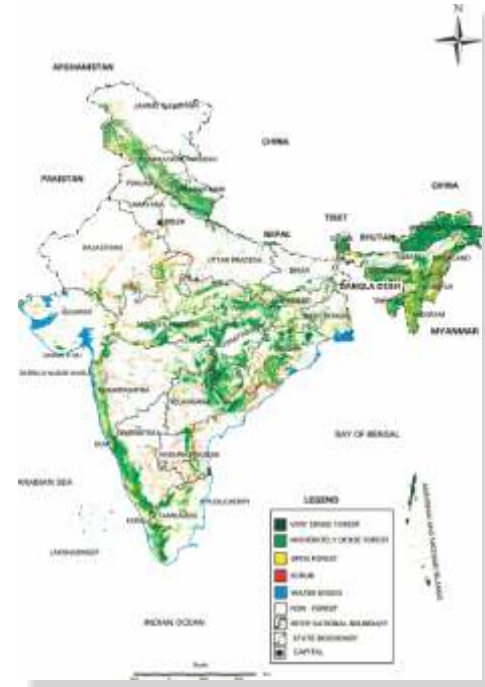
[1] World Bank Report on Assessment of State Implementation of Business Reforms [2] Indian Labour Journal -2015 [3] SWAN: State wide Area Network; CSC: Common Service Centers [4] GSDP – Gross State Domestic Product [5] CAGR during 2004-05 to 2014-15 [6] Source: FDI Intelligence Survey [7] World Bank Report

Forest Scenario in India

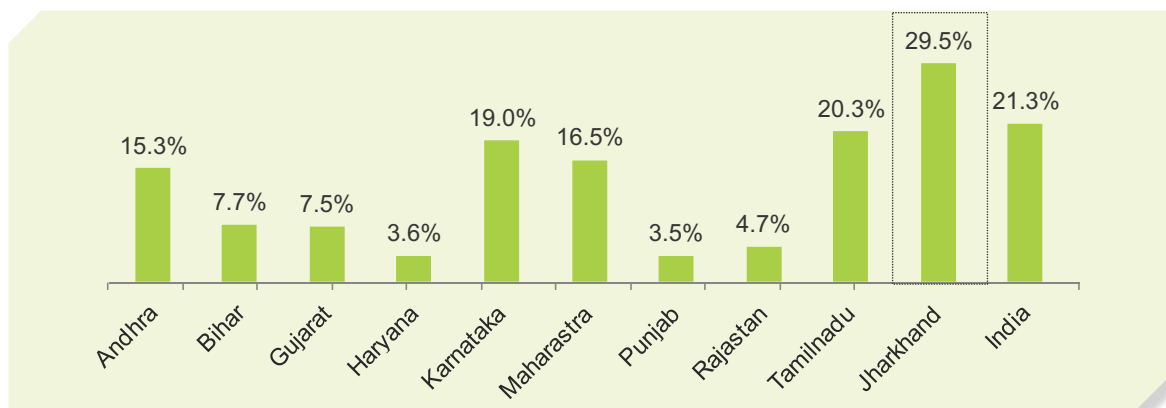
Forest Cover in Different Density Classes

Class	Area (Sq.Kms)	% of Geographical Area
Very Dense Forest	85,904	2.61
Moderate Dense Forest	3,15,374	9.59
Open Forest	3,00,395	9.14
Total Forest Cover ^[1]	7,01,673	21.34
Tree Cover	92,572	2.82
Total Forest Tree Cover	7,94,245	24.16
Scrub	41,362	1.26
Non Forest	25,44,228	77.40
Total Geographical Area	32,87,263	100.00

Forest Cover Map of India



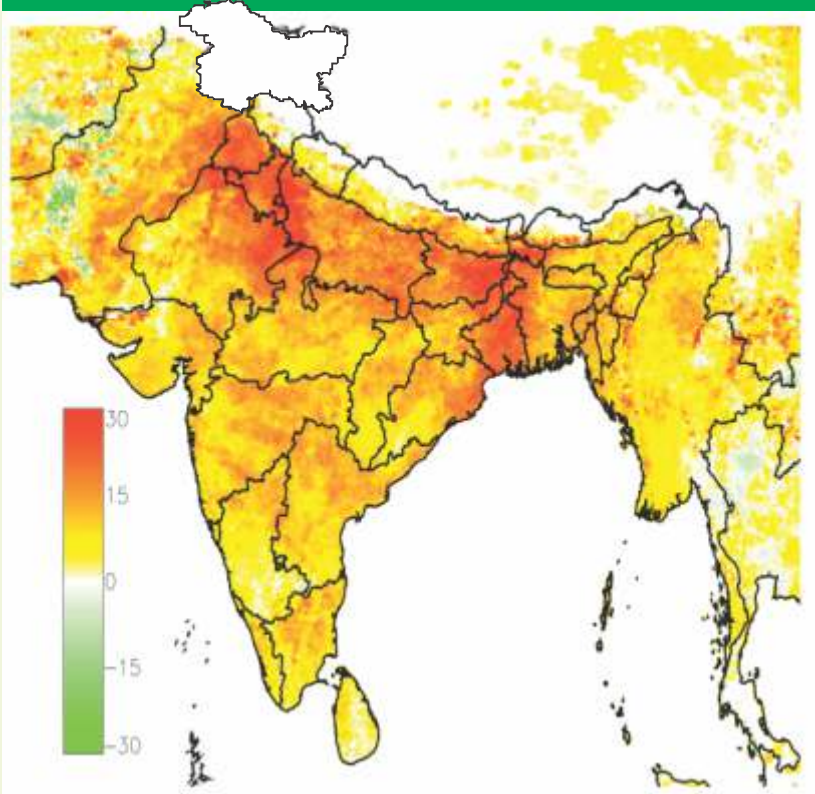
Forest Cover in States



Source: India State of Forest Report, 2015

Environment and Climate Change in India

Change in average PM_{2.5} levels in India, from 2000 to 2012



Note: Above map is estimated from satellite-based aerosol measurements ($\mu\text{g}/\text{m}^3$)

India climbed 6 ranks in 2016 year from 31 to 25 in Climate Change Performance Index (CCPI).

Pledged to reduce emission intensity upto 35% by 2030

Rapid increase in capacity addition of Renewable Energy total share from 3.3 % (in 2002) to 13.9% (in 2015)

Targets to use non-fossil fuel sources for 40% of installed power capacity by 2030

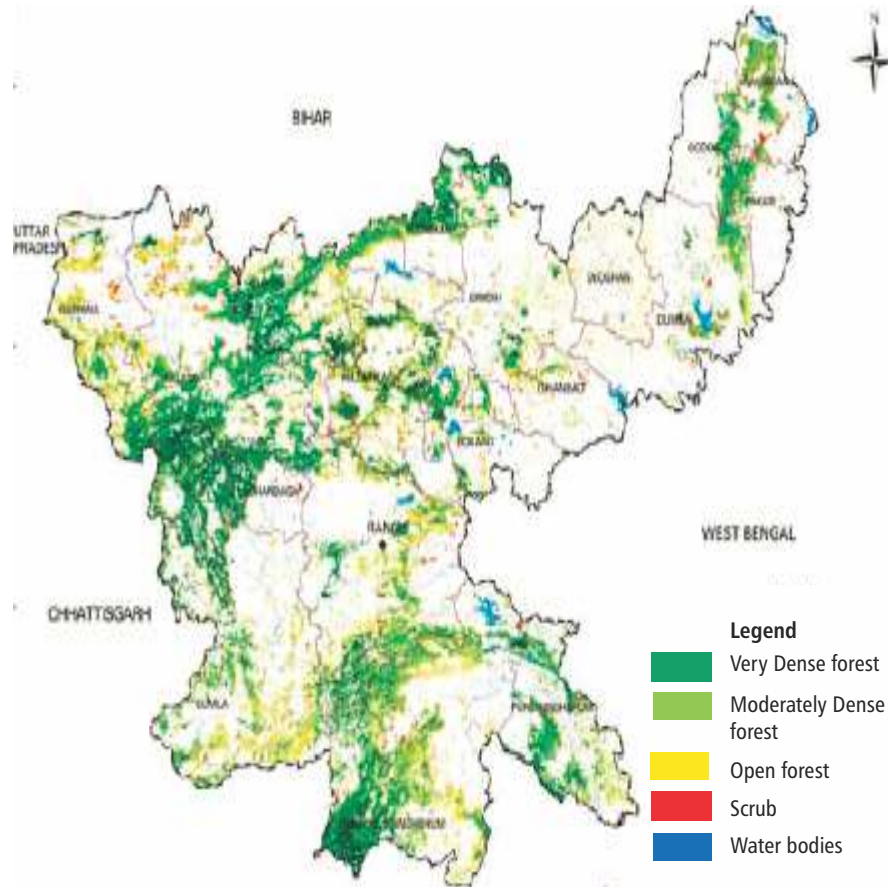
Climate Change Performance Index

Particular	Description
CCPI Rank	2016 25
CCPI Rank	2015 31
Share of Global GDP	6.77%
Share of World Population	17.56%
Share of CO ₂ emissions	5.81%
Share of Global Primary Energy Supply	5.73%

Source: Climate change Performance Index(CCPI)

Forest Scenario in Jharkhand

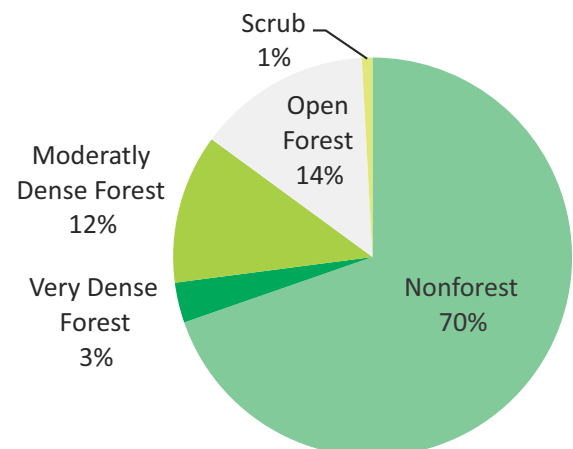
Forest Cover Map of Jharkhand



Forest in Jharkhand

Particular	Description
Forest cover within recorded Forest area	12,149 Sq.kms
Forest cover outside recorded Forest Area	23,478 Sq.Kms
Forest cover with Green wash	17,714 Sq Kms
Forest cover with outside green wash	5,764 Sq.kms
Total Forest cover	23,478 Sq.Kms
Tree Cover	2,783 Sq.Kms
Per capita Forest & Tree Cover	0.080 ha
India's Forest & Tree Cover	3.31%

Forest Cover

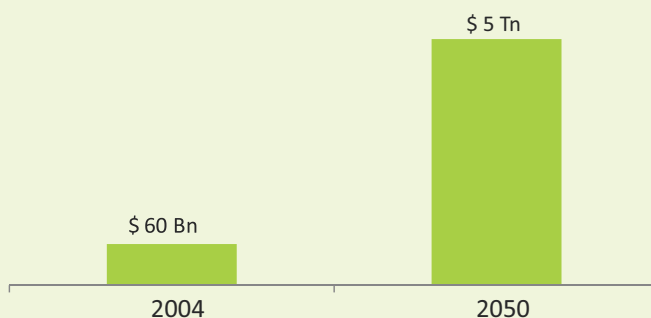


Investment Opportunity in Herbal Market

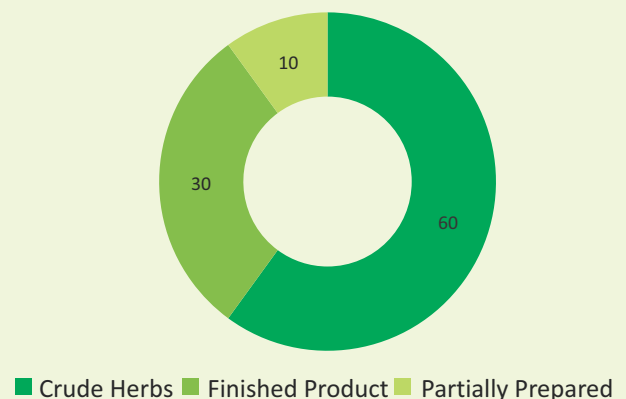
Key trends in Herbal & Ayurvedic market

- As per the estimates of the WHO, nearly 80% of the world's population depends on herbal medicine for their primary health care requirements.
- India is rapidly emerging as a key player for supplying medicinal plants to the world.
- The total Herbal market in India is nearly USD 60 bn.
- Exports of Ayurvedic medicines have reached a value of USD 100 million a year
- Leading players in the FMCG segment like the Hindustan Lever Limited (HLL), Dabur, Patanjali, Hamdard etc. are increasing their focus on Ayurveda.
- Contract farming of medicinal plant species through PPP mode which are in demand in the foreign market is seen as the key growth driver of the domestic herbal industry.
- With nearly 29% of forest cover & a wide variety of flora & fauna; Jharkhand can be a leading supplier of herbal & Ayurvedic products and may attract investment from the leading companies for processing of these raw materials

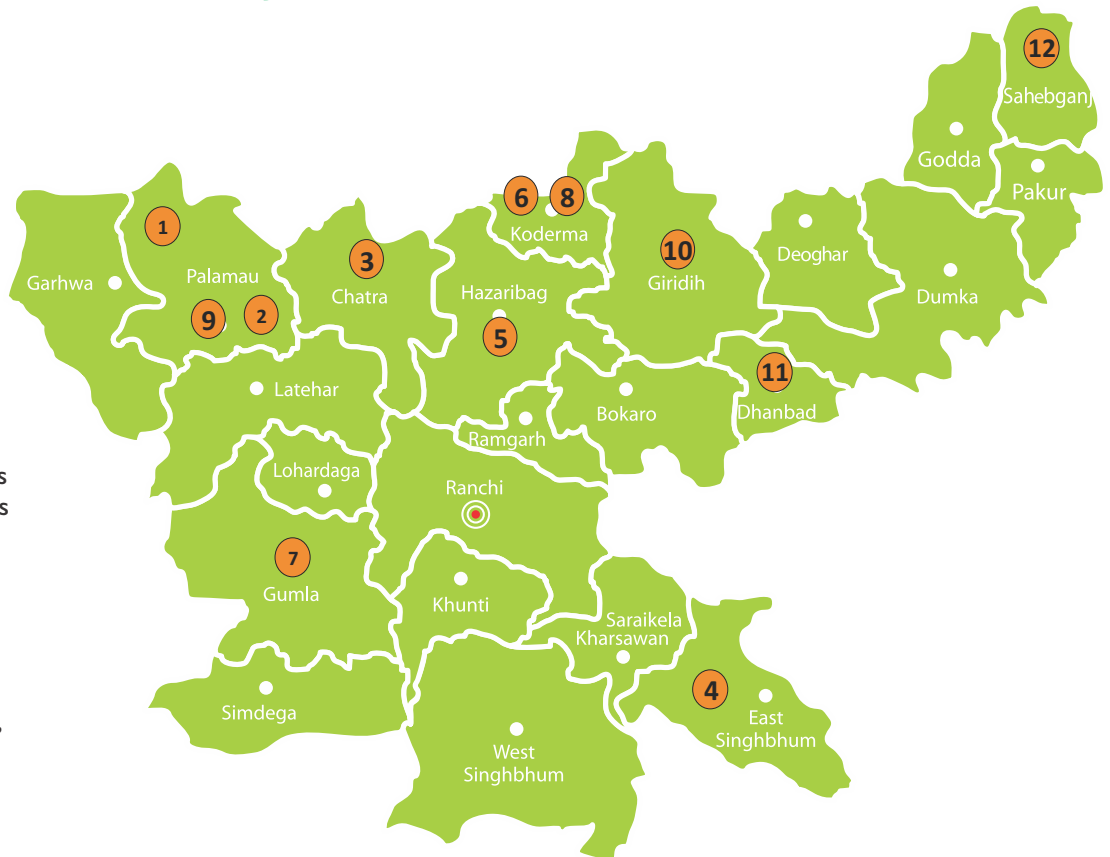
Herbal Market in India



Ayurvedic Export Market



National Parks and Wildlife Sanctuaries in Jharkhand



- ➔ Most of National parks and wildlife sanctuaries are located in Northern parts of the state.
- ➔ Sloth Bear, Common langur, monkey, wild dog, cheetal, Sambhar, Nilgai, Wild boar, Barking deer, Hyaena, are few animals besides a large varieties of birds, reptiles, amphibians & insects are found in Jharkhand.

National Park & Wildlife Sanctuaries	Area (in Sq.Kms)	Districts
1. Belta National Park	231.67	Palamu
2. Palamu Sanctuary	794.33	Palamu
3. Lawalong Sanctuary	207.00	Chatra
4. Dalma Sanctuary	193.22	Singhbhum (E)
5. Hazaribagh Sanctuary	186.25	Hazaribagh
6. Kodarma Sanctuary	177.35	Kodarma

National Park & Wildlife Sanctuaries	Area (in Sq.Kms)	Districts
7. Palkot Sanctuary	183.13	Gumla
8. Gautam Buddha Sanctuary	100.00	Korarma
9. Mahuadanr Wolf Sanctuary	63.25	Palamu
10. Parasnath Sanctuary	49.33	Giridih
11. Topchanchi Sanctuary	8.75	Dhanbad
12. Udhwa Lake Bird Sanctuary	5.65	Sahebgunj

Policy Interventions

Jharkhand State Pollution Control Board - Online Consent Management and Monitoring System (OCMMS)

- ◆ Online Consent Management and Monitoring System (OCMMS)- Started from 1.04.2015
- ◆ CTE^[1] & CTO^[2] starting from submission of application with fee till final disposal are online
- ◆ SMS alerts related to clarification/show cause/grant/rejection of application related to consent are sent to the unit
- ◆ Digitally signed certificates are available in public domain along with the facility for downloading the same from the portal
- ◆ Provision of android based mobile application – started from 5.6.2015
- ◆ Integration of OCMMS with Single Window System of the Government of Jharkhand
- ◆ Provision of auto-renewal of consent to operate on self-certification for green and orange category industries
- ◆ Mandated on-line submission of inspection report within 48 hours to the department
- ◆ Allowed third part certification for orange high risk categories of industries by empaneling multiple vendors of Jharkhand
- ◆ Computerized risk assessment for identifying establishments that need to be inspected
- ◆ Adoption of categorization of industries into red, orange, green and white categories by Central Pollution from 1.4.2016
- ◆ Integrated all services of Pollution Control Board with Jharkhand Single Window Portal: www.advantage.jharkhand.gov.in

[1] CTE : Consent to Establish
[2] CTO : Consent to Operate

Policy Interventions

Others

- ◆ Rehabilitation of waste lands at priority and increased pace
- ◆ Thrust on greening through linear plantations and Plantation on Private land
- ◆ Strengthening linkages of livelihood enhancement of forest dependent households through forest based activities
- ◆ Encouragement to Minor Forest Produce sector through better procurement, Processing and Production
- ◆ Enhanced Geospatial and ICT based forest management
- ◆ Capacity building and skill development of officials and members of Joint Forest Management Committees
- ◆ Online facility to obtain permission for tree felling and transit permit
- ◆ Online Consent Management System through mobile application in JSPCB^[1]
- ◆ CTO given by JSPCB valid for a minimum period of five years
- ◆ Third Party Audit: Organizing third party audit for better compliance of environmental laws

Investment
Areas

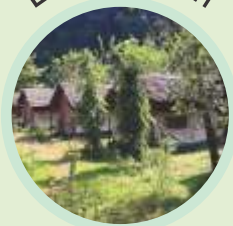
National Parks and Sanctuaries



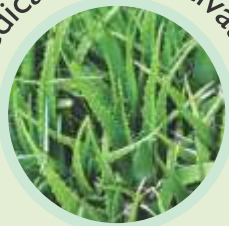
Mass Plantation



Eco-Tourism



Medical Plant cultivation



Urban Forestry



[1] JSPCB: Jharkhand State Pollution Control Board





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