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## Research Article

# SACRED GROVES AS CENTRES OF CULTURAL AND BIODIVERSITY CONSERVATION: A CASE STUDY OF JHABUA DISTRICT OF MADHYA PRADESH

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### ABSTRACT

Sacred Groves, patches of natural forests, a manifestation of nature worship offer ecological, environmental and socio-cultural functions to the local communities. This paper is based on the study of three sacred groves in Jhabua district in Madhya Pradesh that is demographically dominated by the Bhil tribe and brings out the present status of these groves in terms of ecological and cultural importance. This community has been protecting these groves over decades in the honour of their deities and ancestral spirits where they perform their religious rituals. The interconnection between the Bhil community and nature since time immemorial is indicated here. There is evidence now that the clans in Bhil tribe have been associated with the worship of specific species sacred to them and these species happen to be of "ecological keystone value". It also suggests some solutions to biodiversity conservation in regard to the present-day threats and depletive factors affecting the sacred groves.

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### INTRODUCTION

'Grove' is a thicket of trees, natural or planted and 'Sacred' means holy, sanctified, inviolable or religious. Sacred Groves are fragments of natural forests or patches of vegetation created by indigenous communities, varying in size from a few square meters having a cluster of few trees to several hectares (Malhotra, 2007), protected and conserved by them over the decades in the honour of their deities and ancestral spirits where they perform their religious and cultural rituals. Sacred Groves come across as centers of in-situ conservation. These are critical to the communities' traditional cultural identity.

The Bhils, after the *Gonds* and the *Santhals*, form the third largest tribe of India and they are inhabitants of mainly Madhya Pradesh, Rajasthan, Gujarat and Maharashtra (Rajora and Solanki, 2015). According to the 2011 Census Bhil is the most populous tribe constituting 37.7 percent of the total scheduled tribe population in MP. Jhabua, Alirajpur, Dhar, Ratlam, Badwani and Khargone districts have high populations of the Bhils. Jhabua District shares its boundaries with Rajasthan in the north, Dhar in the East, Alirajpur in the South and Gujarat in the west. The total area of the district is 3,782 sq.km. and has five tehsils. The 2011 census figures of the demographic profile of Jhabua show the total Bhil population as 4,45,194 males and 4,44,388 females the total population

being 8,89,582 persons. Of the total population 8,59,692 reside in Rural area and 29,890 in the Urban area.

According to the Working Plan document Jhabua has a total forest area of 734.74 sq.km (21.24% of the district area). The district has predominantly mixed forest and in some places teak is dominant. 58% of the forest has less than 0.1 density, about 40% has between 0.1 to 0.4 density and Only 2% has density between 0.4-0.7. In this kind of a landscape where the vegetation has seen so much depletion due to illicit felling, encroachments or high biotic pressure it is a welcome sight to see patches of vegetation with old majestic trees near the villages. These are areas where the village deity resides, and such area were designated sacred by elders of the past generations and no one seems to know its date of formation as these vegetated patches have been protected by their belief system since time immemorial. There is little mention about their conservation initiatives in anthropological aspects. There are no written books on religious practices or any literature that hands over ritualistic practices to the younger generation. They believe that their Deity protects and resides in that area and watches over them, guides them and protects them from all evil and even brings upon them difficult times if they disobey the laid down norms or taboos of the community. Taboos occur in various forms. nobody knows who laid down these rules. Nobody can remove any part of a plant or tree for personal use. If ever a tree gets uprooted or dries out, its

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removal is done for the purpose of constructing a shed over the Deity or is used in activities related to community rituals, often as fuel wood for community feasts. A strong belief and a fear exist in the people that breaking of taboos or promises kept with the Deity may surface in the form of disease, accident or even death. Every aspect of their life is connected to the worship of their deity and they visit her with offerings for blessings on festive occasions or thanks giving on fulfilment of their wishes which they had sought from her. The community respects the unwritten laws of the Deity and therefore the Sacred Abodes or Groves got the protection from generations to generations. A village may have its own grove, or a grove may be visited by a cluster of villages usually two or three having faith in the Deity present in the Grove. The Deity reside in trees and it was observed that there are no temples constructed for them. The priests opined that the goddess appears in their dreams and communicates her decisions or wants which the priest communicates to the villagers, and the dream is respected at all costs.

On the ecological front, these patches of trees can boast of the largest or the oldest life forms in that area. Some groves present a picture of the past glory that the forests in that area may have enjoyed. These trees are indicators of the best adaptability and resilience of a species in the locality.

The sacred Groves studied were of Khairmal, Kallipura and Sandala.

## METHODOLOGY

The Sacred Groves were identified and visited with the help of the local Forest department's forest guards and with the help of villagers. The GPS points of the boundaries were taken and recorded on the Google maps and the area calculated. The plant species were recorded. The height and girth at breast height (GBH) of the trees was recorded. Informal interviews of villagers and people's representatives regarding the deity, the prevalent taboos, and the importance of vegetation and the management of each grove were done. Forest records, the working Plan from the Divisional Forest Office were consulted. It was seen that these sacred groves had never been studied or documented before.

## RESULTS AND DISCUSSION

The various attributes of the sacred groves studied in terms of their locations, area, and the deity worshipped.

### Khairmal



### Khairmal sacred grove Google Image

This is a village about eight kilometres away from Jhabua. The sacred grove is on the periphery of the village and its area is 19640 sq mt.

### Observations show the following

It is a good patch of natural forest, with no artificial plantation and no civil construction. Medicinal plants appear during rains, grazing becoming an issue the area shown by the villagers considered as a sacred area was found to be 19640 square meters. It is a part of the forest area located adjacent to it. While this area presents a picture of a well-protected patch of forest, the adjoining area seems a scrub land and also shows areas of encroachments. The Deity worshipped is "Sawanmata" under the *Steculiaurens* tree and "Baba dev" under the *Soymidafebrifuga* tree. The main species of the area found are shown in table 1 and the largest trees found in the grove are shown in table 2

This sacred grove is an abode of a number of birds like Hornbill, Bulbul, Frankolins, Peafowls etc and reptiles like snakes and Monitor lizards are seen frequently.

### Kallipura



### Kallipura Sacred Grove Google Image

This is a village located at a distance of about 15 km from Jhabua. The Sacred Grove of Kallipurais located in a revenue area of the village and has an area of 3297 square meters. It is a natural patch of trees of seed origin. It has no plantation, undergrowth grows only in rainy season. This area has the biggest trees in the village. The forest area visible from the Grove presents a dismal degraded picture. The Grove is not fenced nor has any structures built by any agency. The main species found in the grove and the ones with the largest size are shown in table 1 and 2 respectively. The Deity worshipped is "Hovan Mata" and resides under the *Tectonagrandis* (Teak) tree. There is no temple constructed here and the deity is represented vermilion smeared sacred round stones.

**Sandala**



**Sandala Sacred Grove Google Image**

This village is situated about 17 kilometres from Jhabua. the sacred grove is a part of the village revenue area and is situated just on the road-side. It has an area of 8121 square meters. The naturally occurring trees are stout and tall. The interventions made by the Panchayat were strongly felt. The grove is surrounded from all sides by a barbed wire fence done by the Panchayat. A plantation was taken up by the Panchayat and species like *Prosopis*, *Acacia*, *Delonix regia*, Aonla, Bamboo and *Jatropha* were introduced, some species could have been avoided. A Panchayat hall exists in the area of the Grove, an encroachment in the form of a hutment was also observed. A hanuman temple is also located in one corner of the grove just adjacent to the road. The main species found in the grove and the ones with the largest size are shown in table 1 and 2 respectively. The deity worshipped are "Kalikamata" and "Sawanmata" that reside under the *Azadirachta indica* (Neem) tree. The sacred grove also has a number of "Gatlas", huge stones with figures of men or women carved on them placed under the *Bombax cieba* tree in commemoration of the dear ones who died an untimely death or were important/respected elders of the village

**Table 1** Main Species of the Jabua District Groves

No.	Main species	Name of the Sacred Grove		
		Khair mal	Kallipura	Sandala
1	Umbyia ( <i>Miliusatomentosa</i> )	✓	×	×
2	Tendu ( <i>Diyospyros melanoxylon</i> )	✓	✓	×
3	Teak ( <i>Tectonagrandis</i> )	✓	✓	×
4	Behda ( <i>Terminalia belirica</i> )	✓	×	×
5	Dhawda ( <i>Annogisuslatifolia</i> )	✓	✓	×
6	Mokha ( <i>Schreberaswietenoides</i> )	✓	×	×
7	Moyan ( <i>Lanneacoromandelica</i> )	✓	×	×
8	Rohan ( <i>Soymidafebrifuga</i> )	✓	×	×
9	Patrala ( <i>Dalbergiapaniculata</i> )	✓	×	×
10	Beeja ( <i>Pterocarpus marsupium</i> )	✓	✓	×
11	Neem ( <i>Azadirachta indica</i> )	✓	×	✓
12	Saja ( <i>Terminaliatomentosa</i> )	×	✓	×
13	Ladodi ( <i>Holorhinaantidysentrica</i> )	✓	✓	×
14	Renjha ( <i>Prosopis cineraria</i> )	×	✓	×
15	Pipri ( <i>Ficusglomureta</i> )	×	✓	×
16	Palash ( <i>Butea monosperma</i> )	×	✓	×
17	Semal ( <i>Bombax cieba</i> )	×	×	✓
18	Bad ( <i>Ficus bengalensis</i> )	×	×	✓
19	Gulmohar ( <i>Delonix regia</i> )	×	×	✓
20	Subabool ( <i>Leucaena leucocephala</i> )	×	×	✓
21	Babool ( <i>Acacia nilotica</i> )	×	×	✓

22	GandoBabool ( <i>Prosopis juliflora</i> )	×	×	✓
23	Bamboo ( <i>Dendrocalamusstrictus</i> )	×	×	✓
24	Chirol ( <i>Holopteliaintegrifolia</i> )	×	×	✓
25	Rinjha ( <i>Acacia leucopholea</i> )	×	×	✓
26	Aonla ( <i>Embilicaoficinalis</i> )	×	×	✓
27	Alwa ( <i>Ailanthus exelsa</i> )	×	×	✓

**Table 2** Largest Trees in the Groves

No.	Main species: Local Name and Botanical names	Name of the Sacred Grove					
		Khairmal		Kallipura		Sandala	
		GBH	Ht.	GBH	Ht.	GBH	Ht.
1	Umbyia ( <i>Miliusa tomentosa</i> )	1.2 mts,	12 mts	×	×	×	×
2	Tendu ( <i>Dyospyros melanoxylon</i> )	1.20 mts,	10 mts	×	×	×	×
3	Teak ( <i>Tectona grandis</i> )	1.20 mts,	10 mts	1.10 mts	10mt	×	×
4	Rohan ( <i>Soymida febrifuga</i> )	2.40 mts	18 mts	×	×	×	×
5	Patrala ( <i>Dalbergia paniculata</i> )	1.90 mts	9 mts	×	×	×	×
6	Saja ( <i>Terminalia tomentosa</i> )	×	×	1.15mts,	12 mts	×	×
7	Beeja ( <i>Pterocarpus marsupium</i> )	×	×	1.20mts	13mts	×	×
8	Pipri ( <i>Ficus glomureta</i> )	×	×	2.80 mts	13 mts	×	×
9	Semal ( <i>Bombax cieba</i> )	×	×	×	×	4.56 mts	26 mts
10	Bad ( <i>Ficus bengalensis</i> )	×	×	×	×	2.40 mts	20 mts
11	Neem ( <i>Azadirachta indica</i> )	×	×	×	×	1.20mts,	13mts
12	Alwa ( <i>Ailanthus exelsa</i> )	×	×	×	×	2.40mts	23 mts

\*Here Gbh - Girth at Breast Height, Ht- Height)

**What do the Villagers do in the Sacred Groves?**

The villagers worship their deity and offer prayers. They perform religious rituals and conduct socio-cultural activities there. Some ceremonies are exclusively performed by men and some by women separately. Offerings made may vary from Animal sacrifices, offering country liquor, bael leaves, incense sticks, sweets, first harvest, vermilion, coconut etc. Villagers who are *Bhagats* are vegetarians and therefore offer grains, fruits, ghee, incense, coconut etc they do not sacrifice animal if they have to offer animals then they set the animals free in front of the Deity. During the festival of *Diwali* and *Navratri* terracotta horses called *ghoda* and urns called *garba* are offered.

Villagers do rituals for thanks giving, on fulfilment of *mannat* or *wishes* -be it for rain, cure of disease, cattle wellness, child birth, marriage, or profit in business etc. They take it as a part of compulsory duty to give the offerings once their wishes are fulfilled. They protect the area from outsiders and thieves. The Sacred Grove also serves as a meeting place for the elderly and also a play area for the children.

**The Results of study and Observations**

On studying the three Sacred Groves it was observed that the beliefs and restrictions related to the Deities, led the community to protect these groves as sacred abodes of the Deities they worship with all commitment. Some other observations made are as follows;

**Beliefs and Taboos**

- ✓ The Deities reside under or on trees and do not want any artificial cover in the form of temples etc.
- ✓ The Deity watches over them at all times, guides and protects them but also punishes them or shows displeasure if they do any wrong or do what is taboo.
- ✓ Nothing can be removed from the Grove for personal use. No plant produces in whole or part also.
- ✓ If a tree gets uprooted or dries out, it can be used only in works related to community rituals only.
- ✓ If a wish (*mannat*) has been granted then whatever the devotee had promised to offer to the Deity, has to be fulfilled in a given time span or else the wrath of the Deity befalls.



- ✓ The guidance of the Priest is sought for the rituals done for the worship of the Deity.
- ✓ There are no written books on religious practices or any literature to pass on the ritualistic practices to the younger generation.
- ✓ The Bhil tribe has sacred trees for their "Septs" or "Gotras". They protect their sacred tree as a member of their family and under no circumstances harm it. Some of them are listed in Table 3

**The Alwa tree:** Mahrukh tree, *Aliathusexcelsa* addressed as "Alwa" in the vernacular language is a tree of common occurrence in Jhabua. The tree is not harmed by the Bhils. A belief is commonly heard about the tree, they say that if the mother of an infant walks by under it or its shadow her child at home ends up crying for reasons unknown, especially at night. That is when the mother goes back to the tree and hurls stones at it and returns to find her child playful and not crying. If the mother cannot go to the tree; the father does the same and the child stops crying thereafter.

**Table 3** Bhil Tribe 'Septs' and Their Sacred Trees

No.	Bhil tribe 'septs'	Sacred trees
1	Muvel, Gawad And Bhabhore	Mango
2	Rawat	Neem
3	Vaskale And Basuniya	Bamboo
4	Barman, Thakur, Bamadka And Ninama	Peepal
5	Meda	Kalam/ Crab/ Behda
6	Dabar And Badkiya	Bargad
7	Bhabhar	Sag/ Teak
8	Jamra, Jarman And Jamod	Jamun
9	Girwal	Amaltas
10	Dindore, Goyal And Machar	Astra/ Bauhinia
11	Bhabhar	Semal
12	Alawa And Amliyar	Aonla
13	Bilwal, Baghel And Charel	Bael
14	Gamad	Mahua
15	Iskiya	Temru/ Tendu
16	Palasia	Palash
17	Anjanba	Anjan
18	Katre	Kalam
19	Solanki	Surjana

**The Sacred Tree:** The Dindores consider the 'Astra or Hetri tree', *Bauhinia recemosa* as their paternal aunt, 'Bhua' or 'Fui'. During the marriage ceremonies of the clan, an invitation is addressed to the tree and the family members go to invite her for the ceremony. The tree is worshipped and invited for the wedding. After the wedding the newlyweds visit the sacred tree again, make offering of Mahua liquor, sweets etc. and worship her and seek blessings for a good future. The Dindores do not harm the Astra tree wherever it is found. They do not even pluck its leaves

#### Perceived Threats to the Sacred Groves

There is a definite threat of encroachments from non-believers and local strong men. The dynamics of insensitive local administration, weak or corrupt leadership fails to prevent it. Dominant and self-opined Village Heads seem to take decisions on behalf of the villagers and flags, temples, roads, tanks, buildings etc are being made much against the will of common villagers who talk about this issue in hushed tones. There is grazing pressure throughout the year. The understorey barely survives after the rains. Thieves from other villages pose threat to mature trees of timber value. The village

youth is shying away from rituals and belief systems under the influence of so called 'modernity'.

#### Ethno Botanical Aspects

The groves, especially after the rains become a treasure of many medicinal plants which the local 'Badwa' or the healer collects and uses to cure diseases in the village. Some plants are of cultural importance too, being used in rituals or ceremonies by villagers. Some of the plants of medicinal importance and their uses are listed below;

- ✓ Apamarg, *Achyranthesaspera*-108 twigs are used in rituals in Hartalika Teej- a local festival.
- ✓ Kali Musli, *Curculigoorchoides*- The root past is mixed with ghee and is consumed to increase potency.
- ✓ Kullu, *Sterculiaurens* -Used as a cure for white marks on the face and body.
- ✓ Pipli, *Ficusreligiosa*-It is said that in case of snake bite, the petiole of young leaves when inserted in both of ears, sucks out the venom from the body.
- ✓ Nai- *Enicostemaaxillare* Leaves crushed in water, strained, on drinking cures fever, also helpful in curing malaria
- ✓ Punarnava- *Boerhaviadiffusa* Pieces of its root are kept in the mouth to cure ulcers of the mouth, the leaves are pureed using water and given to cure stomach ache.
- ✓ Satawari, *Asparaguseracemosus*-The root paste is mixed in water and is given for 15 days to increase man's potency.
- ✓ Rohan *Soymidafebrifuga*-Stem bark is used for curing fractures
- ✓ Babool *Accacianilotica* -Its bark is used for making liquor and its gum is edible
- ✓ Bargad/ Bad, *Ficusreligiosa* -Its leaves are used for making Paniya- a local bread
- ✓ Ankda, *Calotropisgigantea*-The milky latex is applied to the swollen area to reduce pain and inflammation
- ✓ Puwaria, *Cassiatora*-Seeds are crushed with water and applied on eczema for relief. The seeds are roasted in ghee and are crushed to prepare coffee like Beverage.
- ✓ Chirol, *Holopteliaintegrifolia*-The bark is used for making liquor and is used to catch fish.
- ✓ Ratanjyot, *Jatropha curcas*-The stem is used to brush teeth to cure toothache. Its latex is used to get relief from burns.
- ✓ Semal, *Bombaxceiba* -The roots of young seedlings are chewed for more vitality.
- ✓ *Gwarpatha, Aloebarbedensis* -Succulent leaves are mixed with turmeric to cure boils and eruptions
- ✓ Bael, *Aegelmarmelos*-Pulp of ripe fruit is used to cure stomach disorders.
- ✓ Khumbhi, *Careyaarboria*-Leaf paste is applied on the face to reduce swellings
- ✓ Mahua, *Mahucalongifolia*-Oilcake is burnt inside a room to keep away snakes. The bark is used as an anti-termite in agricultural fields.
- ✓ *Gobra Tridexprocumbens*- Five leaves eaten daily to cure gastric problems. The whole plant is crushed, and its juice is used to stop bleeding.
- ✓ Amaltas, *Cassiafistula*-Its fruit is using to keep away mites and bedbugs

### The Ecological Aspects

- ✓ These Sacred Groves can easily boast of the largest trees in the district.
- ✓ Jhabua has 73474.37 ha of forest area, most of it is of low density, about 38143.24 ha is of less than 0.1 density and 25837 hectares between 0.1 TO 0.4 density.
- ✓ Jhabua's Forest type is Dry Deciduous type, mostly mixed, has *Boswellia serrata* type and *Teak* type forest too. Young forest is about 651720 hectares out of which Biodiversity rich area is only 5140 hectares.
- ✓ Number of tree species found in Jhabua forests is 139, of which 16 tree species are listed under RET species in the Working Plan of the Division. Apart from trees, 6 shrubs, 43 herbs, 20 grasses, 20 climbers are under RET species too.
- ✓ Rare, Endangered and Threatened (RET) species of the Jhabua, namely *Grewia tilifolia*, *Sterculia aurens*, *Pterocarpus arsupium*, *Schrebera swietenodes*, *Morinda pubescence*, *Soymida ferbifuga*, *Gymnosporia emerginata*, *Dalbergiaspp*, *Gmelina arborea*, *Terminalia belirica*, *Aegle marmelos*, *Patrali*, *Embilica officinalis*, *Boswellia serata* occur in these Sacred Groves (Treasures of Jhabua) irrespective of their location in revenue or forest areas. The trees in these groves are indicators of the best adaptability and resilience of the species in the locality.

### Other General Observations

- ✓ Khairmal sacred grove is located in forest land, Kallipura and Sandala are on revenue land and these belong to the village and the community collectively.
- ✓ The areas are marked as 'dev- sthan' in the revenue village maps as a part of *Gouchar* which is the pasture land.
- ✓ None of these were demarcated on the ground by the revenue or forest authorities. The villagers respect the boundaries of groves set by the village *pujari* who performs religious ceremonies.
- ✓ Among the three groves Kallipura was the smallest and Khairmal the largest.
- ✓ These have high conservation values at the local level as these are patches representing the diverse vegetation of the past and having high ecological, cultural and spiritual value.
- ✓ Not all groves represent the miniatures of their original forest types but KHARMAL and KALLIPURA represent the characteristic vegetation of each area as these have been preserved on religious grounds and never been clear felled. The old trees of Sacred Groves represent such climatic climax species.
- ✓ These groves qualify to be classified as Indigenous Peoples' and Community Conserved territories and areas (ICCAs) due to the following three characteristics that are the driving force behind them; Community managed and protected, Decisions (Collective) and Conservation
- ✓ These are conservation areas which fulfill the most important criteria of defensibility where relatively more protection is assured.

- ✓ These areas are relatively insulated by demographic pressures to a large extent due to the religious beliefs of the Bhil community.
- ✓ These areas show the potential of maintaining high levels of biodiversity close to high human population density.
- ✓ These are manageable small patches that can enable rehabilitation, if opted for and effective in-situ conservation of species that are on the decline. As they are maintained by the community, they will yield success and species loss from the district will be deferred.
- ✓ The belief system of the Bhils has played a crucial role in the in-situ conservation of natural forest patches as the Bhils obey unwritten laws of their belief system and share a collective responsibility towards their protection and maintenance

### The way forward

- ✓ Inventorying and documenting sacred groves have become a part of the Working Plan Code, Trees outside the forest (TOF) are also to be accounted for. NGOs and Universities with the help of District or State authorities can contribute here.
- ✓ Help can be extended to Biodiversity Management Committees (BMCs) for demarcation and documenting various aspects of sacred groves and create management plans for their restoration or upkeep/management.
- ✓ Building bridges of faith and co-operation between the government and the villagers for the sustenance of the biodiversity and cultural values
- ✓ Formation of *Conservation Area Matrix* of such plant diversity areas outside the forest areas with the help of the tribal community.
- ✓ Every Sacred grove is unique and therefore would need independent attention.
- ✓ The local belief system must be respected while proposing rehabilitation, no works proposed without community's consent. It has to be a participatory process.
- ✓ They do not need shrines there, as the deities prefer to occur in natural surroundings under particular trees and not under civil structures.
- ✓ The Sacred Groves can be the source of superior genetic resource required for rehabilitating other Sacred groves and nearby forest areas
- ✓ The Plus trees need to be identified, nurseries set up with the help of local communities /SHGs, seedlings prepared, or direct sowing done as required.
- ✓ Species Reintroduction Plans of the RET to be incorporated into the rehabilitation of the degraded forests based on the line of the plant associations found in Sacred groves.
- ✓ Sacred Grove Festivals and Travelling Exhibitions need to be organised. Indira Gandhi Rashtriya Manav Sanghralaya organizes this every year now and showcases ritual ceremonies.
- ✓ A model Grove of a community could be replicated / planted at District level to showcase biodiversity and spread awareness.

- ✓ Universities must encourage PG students to take up academic projects for documentation of such areas.
- ✓ Sustainable solutions to protecting and conserving biological and cultural diversity together can be made possible through collaboration among local people, sharing of academic inputs with policy makers and facilitation by government schemes. (Effective dialogue and action).

## CONCLUSION

Healthy ecosystems and biocultural knowledge are of great value. The ties between traditional local peoples, their knowledge and resources must remain strong. These Sacred Groves although small in size represent the characteristic vegetation of the area they are found in, they are in large numbers and represent strong ties between the local peoples and nature in the name of their belief system and have high conservation values. They need to be maintained and protected at all costs.

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