

MEE Team-wise Report

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BIHAR

1. KAIMUR WILDLIFE SANCTUARY, BIHAR

MEE Year (2012-13)

A. Management Strengths

1. There is a management plan.
2. The site safeguards a large number of threatened biodiversity values.
3. Large-scale plantation and soil conservation work has been carried out under NREGA during the last two years for habitat restoration.
4. The site has a comprehensive protection strategy. The area is divided into 14 sections and 41 beats for protection purposes.
5. Some resources have been explicitly allocated for achievement of specific management objectives.
6. The performance of most staff members is directly linked to achievement of management objectives.
7. There is opportunistic public participation in a few aspects of protected area (PA) management. Earlier, under the World Bank's eco-development programme, some livelihood and forest restoration activities were planned through a participatory process.
8. The complaint handling system operates in a routine way and is typically bureaucratic in approach.
9. The park authorities are arranging health camps for both the human and livestock populations. The NREGA targets being taken up by the PA management are helping the poor local tribals and other people to address the livelihood issues hitherto left unaddressed.
10. A visitor cum interpretation centre has been developed at Mahoria (near the forest rest house). It is informative and is visited by students and other visitors. The remarks in the visitor book are encouraging.
11. A biennial census of important carnivores and herbivores is carried out regularly by traditional methods, and the counts are being maintained.
12. Most of the biological communities are likely to be able to sustain the native biodiversity.
13. Threats such as poaching and fire have been ended to some extent.
14. The expectations of most visitors are met. There are some sites of historical, ecological and recreational importance where visitors, mostly villagers, students and a few outsiders, visit. The interpretation centre at Mahoria and sightings of large herds of blackbuck are good attractions.
15. The cultural heritage assets, such as the fossil park at Salkhan, Lokhanian rock paintings, Mukha falls, Eco Valley and Blackbuck Valley, are protected, and deterioration is being readdressed.

B. Management Weaknesses

1. Threats and values have been generally identified but not systematically assessed and monitored. Most of the threats have been enumerated in the current management plan, but their adverse effects on the PA have not been properly assessed. Recently, threats from Naxalism in certain areas of the sanctuary have increased.
2. The site has extensive human and biotic interference. There is intense human and biotic pressure on the PA. There are 36 revenue villages within the periphery of the PA and 102 villages within 5 km from the boundary. There are around 27,000 cattle owned by people

living in the periphery of the PA and over 50,000 in the immediate vicinity of the PA. The human population is over 35,000, mostly tribals depending on forest resources. There is heavy grazing by cattle, and removal of firewood and other forest produce is substantial.

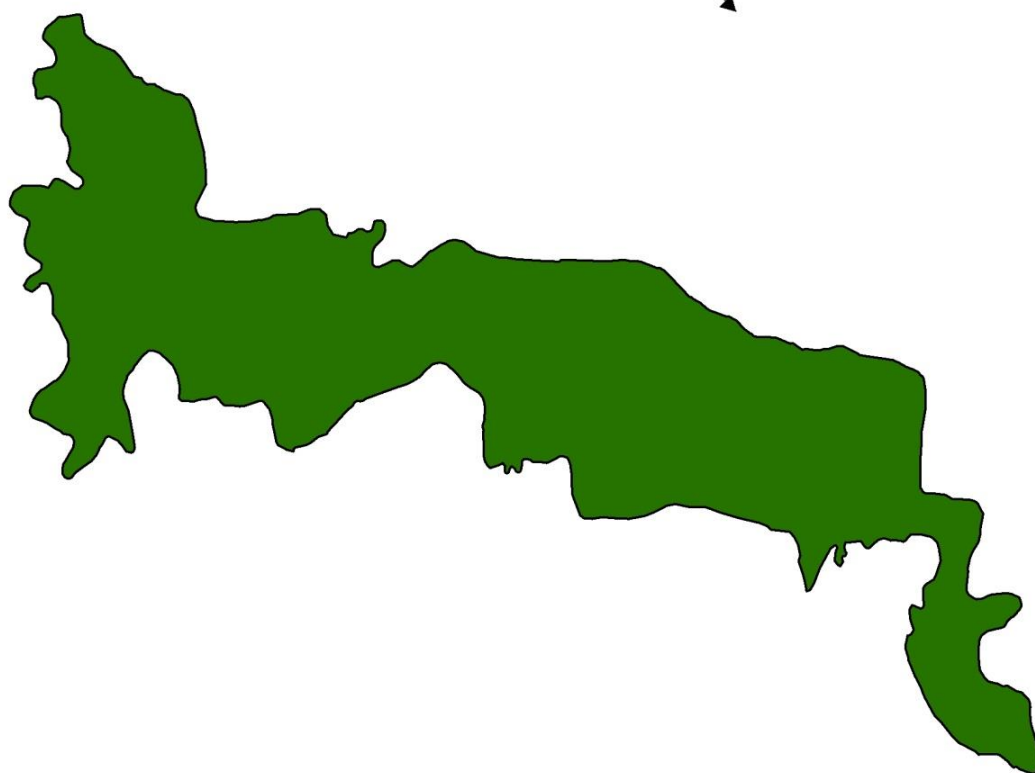
3. The site has been identified correctly but not categorized properly. Although the delineation of the boundary of the sanctuary gives it a long and linear shape, it covers the best forested tracts of the region. Three mini core zones have been identified in the management plan, but they are not being managed as core zones due to heavy biotic pressure. Apart from the mini core zones, a buffer zone, a tourism zone and eco-development zones have also been identified, but these are not being managed according to the provisions of the management plan.
4. The site has a management plan for 10 years prepared in 2000–2001 but management plan is not comprehensive.
5. Very little or no opportunity has been given to stakeholders to participate in planning.
6. A limited number of planning and monitoring programmes are in place for habitat restoration. Only pasture development and afforestation programmes are undertaken, but due to heavy biotic pressure and because of low rainfall, the success is poor.
7. Due to a large number of villages inside and in the immediate vicinity of the PA, there is a rampant human–wildlife conflict in the form of crop damage, injury and death of humans by sloth bears, cattle killing by leopards, etc. While there is no proactive mitigation strategy in place, few attempts have been made to compensate cases of human killing/injury.
8. Fund allocation for management of priority actions is not according to the annual plan of operation. Except for the salary and a few other items, no funds have been provided by the state government for management of priority actions.
9. No resources have been provided by NGOs. On the contrary, of late, a couple of NGOs have raised the issue of forest rights in the sanctuary and other adjoining forests. A total of 594 beneficiaries were thus identified within the sanctuary and a total extent of 200 ha of forests diverted.
10. None of the officers and staff members are trained in any kind of wildlife management. The wildlife guards do not have formal training even as Forest Guards.
11. The data available for common species and the observations at the site show that these species are likely to be able to sustain the natural biodiversity, but information is not available on most other rare species. The tiger is already extinct. Due to degradation, exotic weeds such as lantana are spreading, threatening the native plant diversity.

C. Actionable Points

1. The current plan will need systematic updating with area-specific management prescriptions based on scientific information.
2. The extensive human and biotic interference need to be minimised immediately by effective public participation.
3. The site needs proper categorization into zones.
4. There is great potential for integrating the PA into a wider ecological network as there are large forest areas of U.P. and M.P. in the immediate vicinity, including two wildlife sanctuaries of M.P., but there is little or no coordination among the various forest divisions even within the state.
5. NGOs' contributions are needed for PA management.

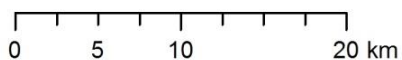
6. Adequate funds and resources should be released in time. More funds are needed for maintenance of the infrastructure and assets, especially the wireless system, firearms and vehicles.
7. The human and financial resources are insufficient for most tasks. Even the sanctioned strength of the frontline staff is not in position. In view of the ecological and historical importance of the PA, the fund allocation by the Government of India needs to be enhanced immediately.
8. Frontline staff members need to be trained for PA management.
9. Most of the local communities are resource dependent and sincere efforts will be needed to address the livelihood issues of such a large human population. The PA management is not able to pool different livelihood improvement programmes of different departments in the target villages.
10. Systematic evaluation and routine reporting of biodiversity trends need to be done on a priority basis. The cause of the decline of biodiversity inside the sanctuary needs to be determined.
11. The adjacent communities should be involved for effective PA management.
12. Little or no information on PA management publicly available. The brochure of the PA is brief and needs to be updated. Separate brochures need to be developed for historical sites such as the fossil park and other sites of importance.
13. The visitor facilities and services need to be improved. Detailed information on important sites such as Salkhan Fossil Park, Black buck Valley, the Lekhania rock paintings, Mukha falls and Eco Valley needs to be provided as these are frequented by visitors.
14. From the available information it is difficult to ascertain the trend, but the tiger has vanished, and the status of the chinkara, wolf, caracal, pangolin, etc. needs to be ascertained through good research. In the case of plants there is absolutely no information to assess the population.

Kaimur Wildlife Sanctuary Uttar Pradesh



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

IT and RS & GIS Cell - 2014



Notified Area: 500.73 Sq. km
Notification Year: 1982

1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Some values have been documented.
Values generally identified but not systematically assessed and monitored.	Fair	✓	
Most values systematically identified and assessed and monitored.	Good		
All values systematically identified and assessed and monitored.	Very good		

1.2 Are the threats to site values well documented and assessed?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threats not systematically documented or assessed.	Poor		Threats have been generally identified in the last working plan and periodic reports.
Threats generally identified but not systematically assessed.	Fair	✓	
Most threats systematically identified and assessed.	Good		
All threats systematically identified and assessed.	Very good		

1.3 Is the site free from human and biotic interference?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
The site has extensive human and biotic interference.	Poor	✓	The site is badly disturbed by grazing of cattle, fire NTFP collection and extremist activities.
The site has some human and biotic interference.	Fair		
The site has little human and biotic interference.	Good		
The site has no human and biotic interference.	Very good		

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Site not identified correctly or categorized.	Poor	✓	In one district 90% of the forest is sanctuary and in the other 73%. But considering huge local population, especially tribal, this is irrational.
Site identified correctly but not categorized.	Fair		
Site identified correctly but not systematically categorized.	Good		
Site identified correctly and systematically categorized with proper zonation plans.	Very good		

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No relevant Management Plan in place.	Poor	✓	There is no management plan for the sanctuary. Even the working plan has not been prepared after 1972.
Management Plan exist but not comprehensive.	Fair		
Site has a comprehensive Management Plan.	Good		
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good		

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	It will also be difficult to prepare one, unless law and order situation improves.
Management Plan sometimes updated in adhoc manner.	Fair		
Management Plan routinely and systematically updated.	Good		
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good		

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor		70% of the area of the sanctuary is virtually under the control of the extremists. However, in view of this, timber mafia activities are less.
Sites safeguards a few threatened biodiversity values.	Fair	✓	
Sites safeguards a large number of threatened biodiversity values.	Good		
Sites safeguards all threatened biodiversity values.	Very good		

2.5 Are stakeholders given an opportunity to participate in planning?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		The stakeholders participate partially in eco-development planning.
Stakeholders participate in some planning.	Fair	✓	
Stakeholders participate in most planning processes.	Good		
Stakeholders routinely and systematically participate in all planning processes.	Very good		

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor	✓	In absence of working plan and management plan, all works are adhoc in nature and implemented where access is there.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair		
Habitat restoration programmes are generally well planned and monitored.	Good		
Habitat restoration programmes are thoroughly planned and monitored.	Very good		

2.7 Are reintroduction programmes systematically planned and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Reintroduction programmes are entirely adhoc.	Poor	✓	No re-introduction of species done nor any thing is contemplated now.
Limited planning and monitoring programmes are in place for reintroduction programmes.	Fair		
Reintroduction programmes are generally well planned and monitored.	Good		
Reintroduction programmes are thoroughly planned and monitored.	Very good		

2.8 Does the site has an effective protection strategy?

Assessment criteria			
Condition	Category	(Tick ✓)	Remarks
Site has no protection strategy.	Poor		Protection is restricted to only 30% of the area where some access in thee.
Site has an adhoc protection strategy.	Fair	✓	
Site has a comprehensive protection strategy but is not very effective.	Good		
Site has a comprehensive and very effective protection strategy.	Very good		

2.9 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Human-wildlife conflicts are rampant.	Poor		Wild animal population being not rich, the man animal conflict is less. However through EDC some mitigatory measures have been taken.
Site has been able to mitigate few human-wildlife conflicts.	Fair	✓	
Site has been able to mitigate many human-wildlife conflicts.	Good		
Site has been able effective in mitigating all human-wildlife conflicts.	Very good		

2.10 Is the site integrated into a wider ecological network following the principles of the ecosystem approach?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Site not integrated into a wider network/ landscape.	Poor		Site is situated in the broad recommended area of WII's PA Network.
Some limited attempts to integrate the site into a network/ landscape.	Fair	✓	
Site is generally quite well integrated into a network/ landscape.	Good		
Site is fully integrated into a wider network/ landscape.	Very good		

3. Inputs

3.1 Are personnel well organised and managed with access to adequate resources?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor		The personnels are broadly allocated to PA protection and management, but their scientific acumen does not appear to be upto mark.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair		
Some personnel explicitly allocated towards achievement of specific management objectives.	Good	✓	
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good		

3.2 Are resources (vehicle, equipment, building etc.) well organised and managed with access to adequate resources?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor		Resources mostly come from NAEB sources and hence not fully linked to management objective of the sanctuary.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair	✓	
Some resources explicitly allocated towards achievement of specific management objectives.	Good		
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good		

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Resource allocation is adhoc and funds are never released in time.	Poor		Human resources are limited. Financial resources from Non Plan. State plan and NAEB vary from year to year. Release from CSS National Park and Sanctuary scheme is adhoc.
Some specific allocation for management of priority action and some funds released in time.	Fair	✓	
Comprehensive formulae systematically applied to decide most resource allocation and generally funds released in time.	Good		
Comprehensive formulae systematically applied to decide complete allocation of resources for management and on-time release of funds.	Very good		

3.4 What level of resources is provided by NGOs?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
NGOs contribute nothing for the management of the site.	Poor		NGO's resources comes mostly in kind, but is not systematic.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair	✓	
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good		
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good		

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Resources insufficient for most tasks.	Poor		Given the limited access to areas, the financial resources appear satisfactory for such areas, but man power resources are limited.
Resources sufficient for some tasks.	Fair	✓	
Resources sufficient for most tasks.	Good		
Resources are in excess for most tasks.	Very good		

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	There is no trained man power is site. Even peoples knowledge about wildlife conservation is limited for effective management of P.A.
Few trained officers and frontline staff, who are posted in the site.	Fair		
A large number of trained officers and frontline staff are posted in the site.	Good		
All trained managers and frontline staff posted in the site.	Very good		

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No linkage between staff performance management and management objectives.	Poor		Staff performance is limited to protection, habitat improvement and EDC activities.
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair	✓	
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good		
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good		

4.3 Is there effective public participation in PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no public participation in PA management.	Poor		Public participation is limited to EDC activities only.
Opportunistic public participation in some aspects of PA management.	Fair	✓	
Systematic public participation in most aspects of PA management.	Good		
Comprehensive and systematic public participation in all important aspects of PA management.	Very good		

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No systematic approach to handling complaints.	Poor		This is done on receipts of complaints made during EDC meetings and inspections, but the follow up is not systematic.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair	✓	
Coordinated system logs and responds effectively to most complaints.	Good		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

4.5 Does PA management addresses the livelihood issues of resource dependent communities especially women?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No livelihood issues are addressed by PA management.	Poor		Limited livelihood issues are addressed through EDC activities.
Few livelihood issues are addressed by PA management.	Fair	✓	
Substantial livelihood issues are addressed by PA management.	Good		
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good		

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no information on PA management publicly available.	Poor		Publicly available information are there through display boards and EDC meeting registers. No systematic attempt has been made to print literature for wide dissemination of issues and management activities
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓	
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good		
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good		

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Due to prevailing insurgency hardly any visitor services have been developed.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair		
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good		
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good		

5.3 Are management related trends systematically evaluated and routinely reported?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no systematic evaluation or routine reporting of management related trends.	Poor	✓	Checking of works and systematic evaluation of works are hardly there due to very restricted access to most of the parts of the sanctuary to senior officers.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		
Systematic evaluation and routine reporting of management related trends undertaken.	Good		
Systematic evaluation and comprehensive reporting of management related trends undertaken.	Very good		

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No systematic inventory or maintenance schedule.	Poor		Inventory of assets are not fully documented and not all areas accessible hence maintenance is adhoc and not upto mark.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓	
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good		

6. Outcomes

6.1 Are threatened/ endangered species populations stable or increasing?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threatened/ endangered species populations declining.	Poor	✓	There was no comparative data available on wildlife populations. However as per general observation and reports of villagers, the wild animal population is declining.
Some threatened/ endangered species populations increasing, most others stable.	Fair		
Most threatened/ endangered species populations increasing, most others stable.	Good		
All threatened/ endangered species populations either increasing or stable.	Very good		

6.2 Are biological communities at a mix of ages and spacings that will support native biodiversity?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Biological communities unlikely to be able to sustain native biodiversity.	Poor		The area is vast and has got prespect. If law and order position improves there will be improvement of biodiversity.
Some biological communities likely to be able to sustain native biodiversity.	Fair	✓	
Most biological communities likely to be able to sustain native biodiversity.	Good		
All biological communities likely to be able to sustain native biodiversity.	Very good		

6.3 Have the threats to the site being abated/ minimized?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threats to the site have not abated but have enhanced.	Poor		Some threats to site have been minimized through EDC activities.
Some threats to the site have been abated.	Fair	✓	
Most threats to the site have been abated.	Good		
All threats to the site have been abated.	Very good		

6.4 Are the expectations of visitors generally met or exceeded?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Expectations of visitors generally not met.	Poor	✓	Due to insurgency, there are hardly any visitors to the area.
Expectations of many visitors are met.	Fair		
Expectations of most visitors are met.	Good		
Good expectations of most visitors are met.	Very good		

6.5 Are neighbours and adjacent communities supportive of PA management?

Assessment criteria			
Condition	Category	(Tick ✓)	Remarks
Neighbours/adjacent communities are hostile.	Poor		Some support is visible due to establishment of EDCs and their activities.
Key neighbours/communities are supportive.	Fair	✓	
Most neighbours/communities are supportive of PA management.	Good		
All neighbours and communities supportive of PA management.	Very good		

6.6 Are cultural heritage assets protected?

Assessment criteria			
Condition	Category	(Tick ✓)	Remarks
Little or no management undertaken, or despite management efforts, deterioration of cultural heritage assets continues, or values are unknown.	Poor		There are a number of cultural and natural heritage sites in the sanctuary area. Their maintenance is irregular due to law and order situation hence deterioration continues.
Some management activity, but deterioration continues.	Fair	✓	
Planned approach to management underway and deterioration of assets is being redressed.	Good		
Planned approach to management underway and deterioration of assets is being significantly redressed.	Very good		

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	12.5	42.4%
2.	Planning	10	10	100	37.5	
3.	Inputs	05	10	50	27.5	
4.	Process	05	10	50	22.5	
5.	Outputs	04	10	40	15.0	
6.	Outcomes	06	10	60	25.0	
Total		33		330*	140	

* The six Framework Elements were subsequently assigned equal weightage of 100 each. The total MEE score is 600 out of which this site has score 258.3 or 43.1%

2. KANWAR JHEEL WILDLIFE SANCTUARY, BIHAR MEE YEAR (2009–10)

A. Management Strengths

1. Most of the values have been systematically identified and assessed. Site's potential has been recognized for long and recorded by agencies such as the BNHS and local NGOs.
2. The site provides refuge to several species of bird, and this is also a site where bird ringing has been carried out since 1964. The BNHS has been organizing bird ringing programmes.
3. The site has been noted as being one of the nationally and internationally important avifauna sites. There is considerable awareness about the presence of the avifauna and its conservation needs among the visitors.
4. The area is important in terms of migratory birds and rich in cultural and biodiversity heritage.

B. Management Weaknesses

1. There is extensive human and biotic interference at the site. The threats to the site have not abated but have grown worse. There are 10 villages in the surroundings, close by, and there are 16 villages that could be considered to have an influence on the protected area. There are about 3000 cattle in the villages that graze in the drawdown area. The water regulating mechanism, both at the intake points and the outlet, is a key issue, having a bearing on biodiversity conservation. Threats to biodiversity such as poaching and hunting have been recognized, but fishing, crop cultivation, grazing in the drawdown area, etc. have been noted only recently.
2. The site has been identified correctly but not categorized properly.
3. Currently there is no management plan. According to the available records, attempts were made to develop management plans in the past. The plan being followed currently is outdated and has not been approved duly. There is no mechanism in place to review and update it.
4. The stakeholders are not currently involved in the planning processes. There is no advisory committee for the sanctuary (a statutory requirement) in place.
5. The earlier management plan envisaged several actions for habitat restoration, but these have been implemented only partly as the rights over the land under cultivation are not settled yet.
6. The site has no protection strategy. The site is currently under a DFO who is in charge of three districts. A Range Officer who is in charge of the entire district also oversees the proposed sanctuary. The strength of the staff working exclusively for the protected area (PA) is limited to one Forester and one Forest Guard who have limited resources.
7. The site has a problem of conflicts, as a result of which there is bird poisoning and capture, which have been reported by birders. The mitigation plan has been hampered because of the land ownership problem.
8. Resource allocation is ad hoc, and funds are never released in time. The resources are not sufficient for most tasks. The human and financial resources available for the area are meagre. The site has limited infrastructure, including a rest house and a boat. Limited funds are provided by the state, and at present, there is no funding support from the MoEF.
9. The meagre staffs have never been trained in wildlife management. They need exposure through visits to other wetland sites such as Chilika and Bharatpur.

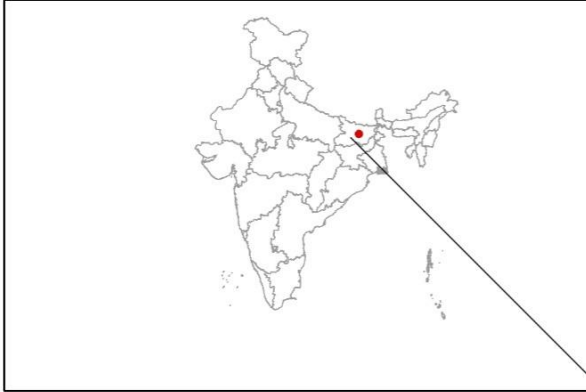
10. Some locals participate in bird ringing programmes; other than this, there is no participation of the public.
11. A complaint handling system is operational, but it is not responsive to individual issues. The follow-up provided is limited.
12. No livelihood issues are addressed by the PA management. The people around the PA are currently cultivating in private areas and are engaged in uncontrolled fishing. There is no mechanism in place to address their livelihood issues.
13. The visitor services and facilities are not adequate for visitors. There is no mechanism for assessing the expectations.
14. There are several species of bird, but there is no means to monitor the trends of species richness and abundance.

C. Actionable Points

1. The tremendous pressures on the site (the rights of the local people, the influence of the huge population in the immediate surroundings of the sanctuary and their cattle population, basic issues of settlement, poaching, hunting, fishing, crop cultivation, etc.) need to be reduced.
2. A survey and record of rights which is in progress needs to be expedited, and a policy decision on settlement of rights needs to be taken. An area-specific mechanism that will dovetail the people's needs with long-term conservation goals needs to be evolved.
3. Urgent steps need to be taken to develop a science-based comprehensive revised management plan in consultation with experts in hydrology, the fauna and wildlife management, involving stakeholders.
4. The advisory committee needs to be formed immediately so that the stakeholders can participate in the planning process.
5. After the settlement of rights, habitat restoration programmes need to be undertaken.
6. The site needs an effective protection strategy, to be implemented with the requisite number of staff members in the PA. Urgent steps need to be taken to appoint the vacant positions among the PA staff.
7. The land ownership problem needs to be resolved immediately so that the conflict involving bird poisoning and capture can be resolved.
8. There are a number of sites around the PA that support birds, and thus concerted efforts are called for to integrate the site into the wider network in the landscape.
9. Adequate resource allocation and timely release of funds are needed for effective management. The meagre human and financial resources must be augmented immediately.
10. The meagre staffs have never been trained in wildlife management. They need exposure through visits to other wetland sites such as Chilika and Bharatpur.
11. Implementation of a scientifically sound system with the active involvement of the local community under the leadership of a motivated and well informed manager could improve the situation.
12. Eco-tourism is one of the major initiatives that could address the livelihood issues of the resource-dependent communities.
13. Guides are available, but an institutional mechanism needs to be planned and put in place for establishing long-term collaboration. A support mechanism needs to be instituted as in Keoladev National Park, Bharatpur. A good interpretation centre will add to the tourism value.

77°15'0"E

Kanwar (Kabar) Lake Wildlife Sanctuary Bihar



28°30'0"N

28°30'0"N



28°25'0"N

28°25'0"N



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

IT and RS & GIS Cell - 2014

0 0.75 1.5 3 km

Notified Area: 63.11 Sq. km
Notification Year: 1989

77°15'0"E

1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Values not systematically documented, assessed or monitored.	Poor		The site [63.11 km ² area) potentials have been recognized since long and recorded by agencies like BNHS / local NGOs How ever critical periodic assessment that is rooted in science and implemented by trained persons is called for
Values generally identified but not systematically assessed and monitored.	Fair		
Most values systematically identified and assessed and monitored.	Good	✓	
All values systematically identified and assessed and monitored.	Very good		

1.2 Are the threats to site values well documented and assessed?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threats not systematically documented or assessed.	Poor		The threats to biodiversity like poaching/ hunting have been well recognized but that to habitat due to fishing/crop cultivation/ grazing in draw down area, etc being taken note of only recently. Critical assessment is wanting.
Threats generally identified but not systematically assessed.	Fair	✓	
Most threats systematically identified and assessed.	Good		
All threats systematically identified and assessed.	Very good		

1.3 Is the site free from human and biotic interference?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
The site has extensive human and biotic interference.	Poor		The site with 63.11 km ² area is under tremendous pressure from human interferences. There are ten villages in the immediate surrounding and there are 16 villages which could be considered to have influence on the PA. About 3000 cattle residing in the villages graze in the drawdown area. Water regulating mechanism both at intake points and out let is a key issue having bearing on the biodiversity conservation.
The site has some human and biotic interference.	Fair	✓	
The site has little human and biotic interference.	Good		
The site has no human and biotic interference.	Very good		

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Site not identified correctly or categorized.	Poor		The PA area is 6311.63 ha which falls in ten villages, i.e. Manjhaul, Jaimangalapur, Sakara, Rajour, Kaneshi, Shirpur-Ekamba, Parora, Narayanipipar, Manikpur vide notification dated 20/6/1989. Its not divided into Zones. Of these, about 3800 ha is with private ownership and about 2562 ha are GM Lands. Status of sanctuary is appropriate.
Site identified correctly but not categorized.	Fair		
Site identified correctly but not systematically categorized.	Good	✓	
Site identified correctly and systematically categorized with proper zonation plans.	Very good		

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No relevant Management Plan in place.	Poor		As per records available there were attempts to develop Management Plans in past [Eco development plan of 1991 with an out lay of 578.23 lakhs]; document now used by the management is a plan for 2004-05 to 2008-09 [Out lay of 562.53 lakhs that includes Protection/ water management / Eco development/ research / tourism etc] (page 49).
Management Plan exist but not comprehensive.	Fair	✓	
Site has a comprehensive Management Plan.	Good		
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good		

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No process in place for systematic review and update of Management Plan.	Poor		The currently followed plan is outdated. & has not been duly approved; there is no mechanism in place for review and updating. The new plan has to be written in consultation with experts on hydrology, fauna and wildlife management, involving stake holders.
Management Plan sometimes updated in adhoc manner.	Fair	✓	
Management Plan routinely and systematically updated.	Good		
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good		

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor		Declaration of site as potential sanctuary has provided a legal shield to the habitat, the site not well administered due to constraints. The PA gives refuge to several species of birds which are documented and this is also a site where bird ringing is done since 1964. Though under tremendous threats, the area is still abode of several rare and threatened species. Some locals are experts in birds and have participated in bird ringing programmes and thus are considered valuable assets
Sites safeguards a few threatened biodiversity values.	Fair		
Sites safeguards a large number of threatened biodiversity values.	Good		
Sites safeguards all threatened biodiversity values.	Very good	✓	

2.5 Are stakeholders given an opportunity to participate in planning?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	The stake holders are not currently involved in planning process. The advisory committee for the sanctuary not in place as per the statutory requirement, Stake holders need be given an opportunity to record their say while preparing the new Plan.
Stakeholders participate in some planning.	Fair		
Stakeholders participate in most planning processes.	Good		
Stakeholders routinely and systematically participate in all planning processes.	Very good		

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor		The earlier Management Plan envisaged several actions for habitat restoration. But these are implemented partly as rights on land under cultivation are un-settled.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair	✓	
Habitat restoration programmes are generally well planned and monitored.	Good		
Habitat restoration programmes are thoroughly planned and monitored.	Very good		

2.7 Are reintroduction programmes systematically planned and monitored?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Reintroduction programmes are entirely adhoc.	Poor	✓	(Not Applicable)
Limited planning and monitoring programmes are in place for reintroduction programmes.	Fair		
Reintroduction programmes are generally well planned and monitored.	Good		
Reintroduction programmes are thoroughly planned and monitored.	Very good		

2.8 Does the site has an effective protection strategy?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Site has no protection strategy.	Poor	✓	The site is currently under a DFO who is in charge of 3 districts. A Range Officer who is in charge of the entire district also oversees the proposed sanctuary. The exclusive PA staff strength is limited to one Forester and a Forest Guard. Daily wagers are employed in winter has rather ad hoc protection strategy.
Site has an adhoc protection strategy.	Fair		
Site has a comprehensive protection strategy but is not very effective.	Good		
Site has a comprehensive and very effective protection strategy.	Very good		

2.9 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Human-wildlife conflicts are rampant.	Poor	✓	The site has the problem of conflicts resulting in bird poisoning and capture which are reported by birders. The mitigation plan has been hampered because of the land ownership problem. Few human wild life conflicts have been resolved.
Site has been able to mitigate few human-wildlife conflicts.	Fair		
Site has been able to mitigate many human-wildlife conflicts.	Good		
Site has been able effective in mitigating all human-wildlife conflicts.	Very good		

2.10 Is the site integrated into a wider ecological network following the principles of the ecosystem approach?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Site not integrated into a wider network/ landscape.	Poor		With large number of migratory birds, site management has wider implications some of which have been recognized by ringing programs conducted frequently. There are number of sites around that support avifauna and thus concerted efforts are called for.
Some limited attempts to integrate the site into a network/ landscape.	Fair	✓	
Site is generally quite well integrated into a network/ landscape.	Good		
Site is fully integrated into a wider network/ landscape.	Very good		

3. Inputs

3.1 Are personnel well organised and managed with access to adequate resources?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Only two field level protection staff currently in place exclusively for the Area. They have an access to limited resources available are limited and thus comprehensive strategy is called for.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair		
Some personnel explicitly allocated towards achievement of specific management objectives.	Good		
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good		

3.2 Are resources (vehicle, equipment, building etc.) well organised and managed with access to adequate resources?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor		The site does have limited infrastructure like a rest house boats. No funds made available from GoI, MoEF in recent past. Limited state funds are provided.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair	✓	
Some resources explicitly allocated towards achievement of specific management objectives.	Good		
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good		

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Resource allocation is adhoc and funds are never released in time.	Poor	✓	No funds were available form Gol PA till 2009-10. The PA is reported to have some funds from the state plan for the current period. MoEF had sanctioned 62.72 lakhs and released Rs. 31.36 lakhs in July 1992 but funds remain utilized. The sanctioned amount was under an APO for habitat improvement, awareness and survey and demarcation activities The PA authorities have initiated steps to get the funds released from the Government. The APO may be revisited and the implemented appropriately
Some specific allocation for management of priority action and some funds released in time.	Fair		
Comprehensive formulae systematically applied to decide most resource allocation and generally funds released in time.	Good		
Comprehensive formulae systematically applied to decide complete allocation of resources for management and on-time release of funds.	Very good		

3.4 What level of resources is provided by NGOs?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
NGOs contribute nothing for the management of the site.	Poor		Mandar Nature Club is one of the NGO active in surveying and preparing checklist of birds. BNHS was organizing bird ringing programme. This is a substantial contribution to the management of the area. There is limited interaction between the management and NGOs
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair	✓	
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good		
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good		

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Resources insufficient for most tasks.	Poor	✓	The human and financial resource for the Area is meager. There could be an Asst. Conservator supported by two Forest Range Officer exclusively posted for the PA along with protective staff
Resources sufficient for some tasks.	Fair		
Resources sufficient for most tasks.	Good		
Resources are in excess for most tasks.	Very good		

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	The meager staff has never been trained in wildlife. They need exposure through visit to other wet land sites like Nalban in Chilka / Bharatpur / wetlands in Gujarat etc for Eco-development and Eco-tourism.
Few trained officers and frontline staff, who are posted in the site.	Fair		
A large number of trained officers and frontline staff are posted in the site.	Good		
All trained managers and frontline staff posted in the site.	Very good		

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No linkage between staff performance management and management objectives.	Poor		
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair	✓	
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good		
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good		

4.3 Is there effective public participation in PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no public participation in PA management.	Poor	✓	There is neither manpower/ NGO collaboration nor financial resources for public awareness programs to ensure public participation. The PA management should include awareness and visitor management in the next Plan. Formation of EDCs and making them partners in PA management need be major thrust in future. Constitution of Sanctuary advisory committee is called for.
Opportunistic public participation in some aspects of PA management.	Fair		
Systematic public participation in most aspects of PA management.	Good		
Comprehensive and systematic public participation in all important aspects of PA management.	Very good		

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No systematic approach to handling complaints.	Poor		Normal checks and balance to ventilate complaints take cognizance of peoples views, [RTI, Vigilance etc] in place. How ever formal response book [complaint registers] to be introduced. There is need for a website
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair	✓	
Coordinated system logs and responds effectively to most complaints.	Good		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

4.5 Does PA management addresses the livelihood issues of resource dependent communities especially women?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓	The people around are currently cultivating in the private areas and are engaged in uncontrolled fishing. There is no mechanism in place to address the livelihood issues. A survey and record of rights which in progress need be expedited and policy decision on settlement of rights need be taken, Area specific mechanism that will dove tail peoples need with long term conservation goals need be evolved. Eco tourism will be one of the major initiatives which can address the livelihood issues.
Few livelihood issues are addressed by PA management.	Fair		
Substantial livelihood issues are addressed by PA management.	Good		
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good		

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no information on PA management publicly available.	Poor		There is considerable awareness about the presence of avifauna & its conservation needs, Site has been recorded as one of the important avifauna site at the national level. Area specific information is being generated but it covers limited area like presence of species but information required for generating publicsupport for long term conservation and its sustenance is called for, Website need beestablished.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓	
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good		
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good		

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	There is one fibre boat and a few guides available in the area. The guides are available but institutional mechanism for their long term collaboration and establishing support mechanism need be planned and put in place as in say Bharatpur. A good interpretation centre with proper guidance could add to the tourism value.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair		
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good		
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good		

5.3 Are management related trends systematically evaluated and routinely reported?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Little or no systematic evaluation or routine reporting of management related trends.	Poor	✓	The DFO routinely collects information but trends not systematically evaluated and monitored for the long term conservation goals.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		
Systematic evaluation and routine reporting of management related trends undertaken.	Good		
Systematic evaluation and comprehensive reporting of management related trends undertaken.	Very good		

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
No systematic inventory or maintenance schedule.	Poor		Nothing specific to record, an average condition.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓	
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good		

6. Outcomes

6.1 Are threatened/ endangered species populations stable or increasing?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threatened/ endangered species populations declining.	Poor	✓	The discussions with NGO (Mandar Nature Club) indicate presence of several species of birds but reports declining trend. Monitoring system is not adequate for conclusive results.
Some threatened/ endangered species populations increasing, most others stable.	Fair		
Most threatened/ endangered species populations increasing, most others stable.	Good		
All threatened/ endangered species populations either increasing or stable.	Very good		

6.2 Are biological communities at a mix of ages and spacings that will support native biodiversity?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Biological communities unlikely to be able to sustain native biodiversity.	Poor	✓	The present management system may not support the diversity in the long run. A scientifically sound system with active involvement of the local community and implemented under the leadership of motivated and well informed Manager would improve the situation.
Some biological communities likely to be able to sustain native biodiversity.	Fair		
Most biological communities likely to be able to sustain native biodiversity.	Good		
All biological communities likely to be able to sustain native biodiversity.	Very good		

6.3 Have the threats to the site being abated/ minimized?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Threats to the site have not abated but have enhanced.	Poor	✓	The threats seem to be on the increase and will lead to major problems if the issues related to final notification, habitat and village dependence are not addressed immediately.
Some threats to the site have been abated.	Fair		
Most threats to the site have been abated.	Good		
All threats to the site have been abated.	Very good		

6.4 Are the expectations of visitors generally met or exceeded?

Assessment criteria			
Condition	Category*	(Tick ✓)	Remarks
Expectations of visitors generally not met.	Poor		Facility not adequate for visitors. There is no way to assess the expectations. The area has tremendous scope with the birds, the heritage with the 'Buddha stupa' and the Fort. The area if managed with trained guides, interpretation centre, facilities like country boats will provide ample opportunities for visitors and thereby ensuring support for conservation.
Expectations of many visitors are met.	Fair	✓	
Expectations of most visitors are met.	Good		
Good expectations of most visitors are met.	Very good		

6.5 Are neighbours and adjacent communities supportive of PA management?

Assessment criteria			
Condition	Category	(Tick ✓)	Remarks
Neighbours/adjacent communities are hostile.	Poor		The PA management is yet to take steps to bring the communities to their fold. There are a few persons in the community who had been active in bird identification and bird ringing programmes of even Dr. Salim Ali. Though not hostile, these people also do not have alternate livelihood options. The livelihoods of the people have to be addressed for support for conservation.
Key neighbours/communities are supportive.	Fair	✓	
Most neighbours/communities are supportive of PA management.	Good		
All neighbours and communities supportive of PA management.	Very good		

6.6 Are cultural heritage assets protected?

Assessment criteria			
Condition	Category	(Tick ✓)	Remarks
Little or no management undertaken, or despite management efforts, deterioration of cultural heritage assets continues, or values are unknown.	Poor		The nearby area has three 'Buddhist stupa' and a fort of Pal dynasty. The area is also internationally known for its bird richness as evident from the bird ringing programmes. The area is important in terms of migratory birds. The area is thus rich in term of cultural and biodiversity heritage. The stoop as are currently protected by the Revenue Department. But there is no system in place to highlight the importance and educate the public.
Some management activity, but deterioration continues.	Fair	✓	
Planned approach to management underway and deterioration of assets is being redressed.	Good		
Planned approach to management underway and deterioration of assets is being significantly redressed.	Very good		

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	17.5	41.66%
2.	Planning	10	10	100	47.5	
3.	Inputs	05	10	50	17.5	
4.	Process	05	10	50	17.5	
5.	Outputs	04	10	40	15	
6.	Outcomes	06	10	60	22.5	
Total		33		330*	137.5	

* The six Framework Elements were subsequently assigned equal weightage of 100 each. The total MEE score is 600 out of which this site has score -----%

3. NAKTI DAM BIRD SANCTUARY, BIHAR

MEE Year 2012-13

A. Management Strengths

1. Nakti Dam Bird Sanctuary, along with Nagi Dam Bird Sanctuary, has been designated an IBA on the basis of criteria A4i and A4iii. Criterion A4i is satisfied in view of the fact that about 1600 endangered bar-headed geese (*Anser indicus*) have been recorded from this IBA, which amounts to 3% (the requirement being a minimum of 1%) of its total population in the biogeographic zone. Criterion A4iii is also met because the site is capable of attracting more than 20,000 birds.
2. In addition to thousands of local and migratory birds visiting the protected area (PA) in winter, many important Near Threatened species, such as the darter (*Anhinga melanogaster*), Oriental white ibis (*Threskiornis melanocephalus*), ferruginous pochard (*Aythya nyroca*) and black-bellied tern (*Sterna acuticauda*) are also found in the sanctuary.
3. The biodiversity of the area is further enriched by the barren, rocky terrain surrounding the water body, beyond the cultivation areas: dry land birds such as the Indian courser (*Cursorius coromandelicus*), Indian sandgrouse (*Pterocles exustus*), yellow-wattled lapwing (*Vanellus malabaricus*) and Indian robin (*Saxicoloides fulicata*) are also found in this area.
4. The villagers have a positive approach towards conservation, which can be used for various management interventions by formally recognizing and suitably integrating in the plan.

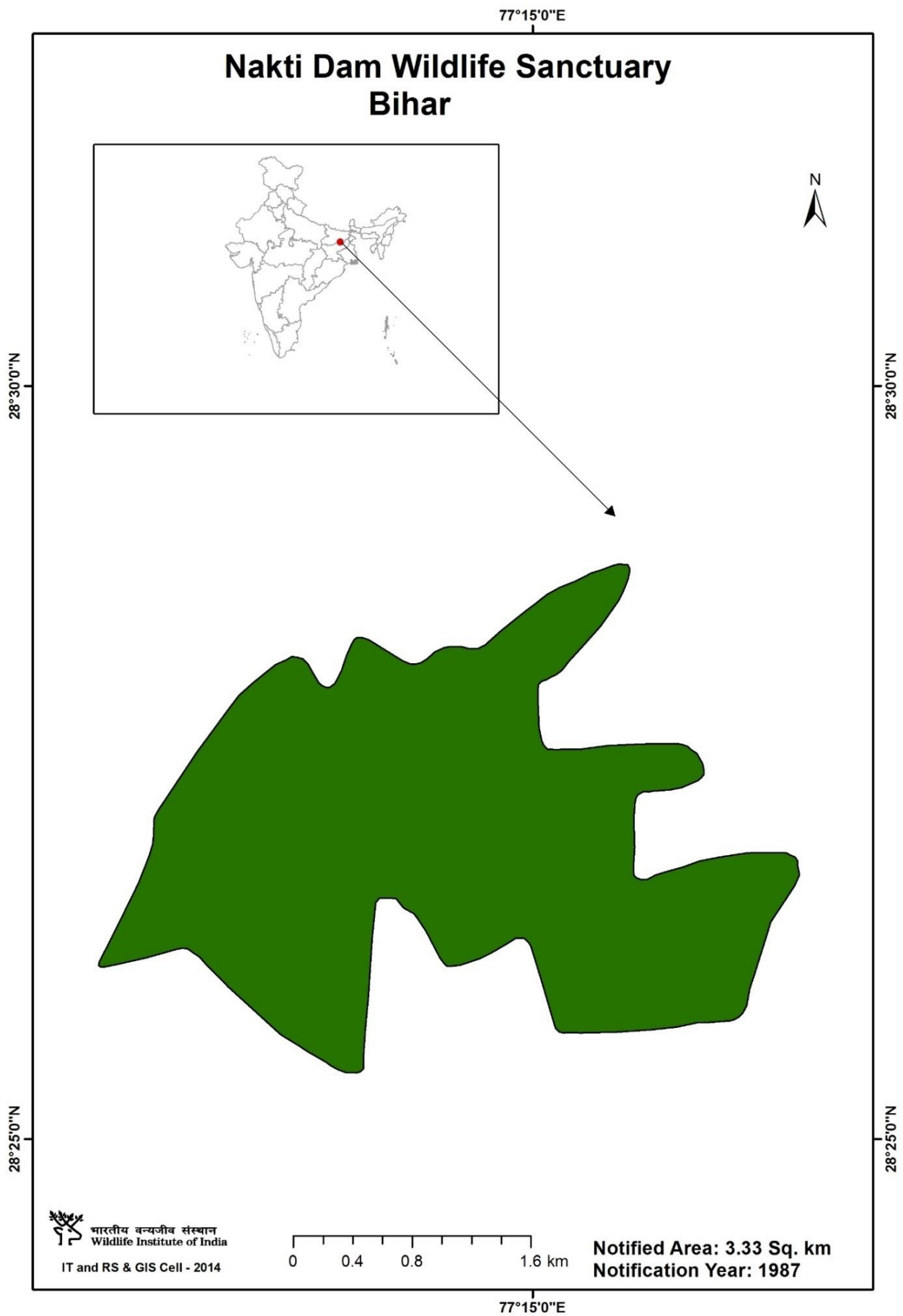
B. Management Weaknesses

1. In the absence of regulations governing the use of pesticides and fertilizers in the catchment, agricultural runoff may lead to pesticide poisoning and eutrophication.
2. Agriculture is practiced in the part of the submergence area that needs to be vacated.
3. Irrigation is the prime consideration of the Irrigation Department. However, retaining the proper quantity of water and other eco-restoration activities for habitat management are indispensable in the wetland eco system. There is no mechanism to integrate/optimize the two activities.
4. Illegal fishing is a threat to the waterfowl.
5. There is no scientific wildlife management plan for the PA.
6. There are no exclusive staff members for the management of the sanctuary, and the strength is inadequate.
7. The funding is negligible.

C. Actionable Points

1. A scientific management plan should be prepared and approval obtained from the CWLW.
2. Nakti Dam Sanctuary and Nagi Dam Sanctuary should be placed exclusively under one Officer/Wildlife Warden who will exclusively look after these Sanctuaries. The staffing pattern of the sanctuary should also be reorganized, with adequate personnel exclusively deployed for the sanctuary work only.

3. Adequate funding to carry out all essential works must be ensured. A state-level steering committee should monitor the sanctioning of fund and timely allocation to PA managers.
4. The participation of the people should be sought for vigorous work on eco-development and eco-tourism initiatives.
5. Conflict of interests is generally prevalent in all wetlands. Hence, all stakeholders should be associated with planning management actions so as to reasonably address livelihood issues.
6. An institutional mechanism must be established for intense coordination between the Irrigation Department and Forest Department in resolving issues over any competitive use of water and the habitat.
7. An effective and professionally designed interpretation, awareness and outreach programme should be developed to disseminate the values of the sanctuary to the people.
8. An eco-sensitive zone should be declared and a conservation strategy must be developed for the same.
9. Research and monitoring work should be prioritized and encouraged.
10. The avian and aquatic fauna as well as their habitat should be scientifically monitored by the management of the PA, with proper documentation.



1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Discussion with CF, DFO, information from APO	<p>Nakti dam bird sanctuary is situated in dist. Jamui of Bihar, covering an area of about 332.85 hectare of reservoir created on Nakti River. The sanctuary was finally notified in 2009.</p> <p>It is approachable by road, 12 km away from Jhajha Rly. Station and 7 km off Jamui-Jhajha Road.</p> <p>This with Nagi Dam Bird sanctuary, about 4 km away, forms an IBA Site (Code: IN-BR-08). Thousands of migratory birds occupy the PA for outward and inward migration to Himalaya. About 1600 Bar headed goose (<i>Anser indicus</i>), which is 3 % of species population of this bio-geographic zone, reported in 2002 to be visiting the site. Near threatened Darter, Oriental White Ibis, Ferruginous Pochard, Black-bellied Tern also visit the area.</p> <p>In the absence of approved plan, the values cannot be said to have been systematically documented or assessed. They are also not monitored.</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historico-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	✓	Discussion with CF, DFO, information from APO and Field visit.	<p>The Government of Bihar realising the importance of this wet land visited by migratory birds notified Nakti Dam Bird Sanctuary under section 18 of wildlife (Protection) Act, 1972; vide SO no. 643 dated 22nd July 1987. The final notification was made on 4th September 2009 under section 26A of the Act. The sanctuary is surrounded by 08 villages. The threats have not been documented after systematic analysis.</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	Discussion with CF, DFO, Information from APO and Field visit	Extensive cultivation by the villagers in the catchment area of reservoir was observed. The reservoir is also heavily used by cattle.
The site has some human and biotic interference.	Fair			
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor	✓	Discussion with CF, DFO, Information from APO and Field visit	Although the Concept of Buffer and Core Zones have been mentioned in the draft plan the plan has no approval. Further the zones are also not demarcated on the ground..
Site identified correctly but not categorized.	Fair			
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good			

Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor	✓	Discussion with CF, DFO, Information from APO and Field visit	No management plan exists. Although a draft plan for the period 2005-2014 had been prepared, it has not been approved.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good			

Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	Since there is no approved management plan the process of systematic review or updating is nonexistent.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor		Discussion with CF, DFO, information from APO and field visit.	Villagers protect the birds and are proud that the birds come to their area. There is no poaching and capture of birds by the local communities. Thousands of migratory birds occupy the PA for outward and inward migration to Himalaya. The important visitor is bar headed goose (Anser indicus). It is an IBA site.
Sites safeguards a few threatened biodiversity values.	Fair	✓		
Sites safeguards a large number of threatened biodiversity values.	Good			
Sites safeguards all threatened biodiversity values.	Very good			

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.6 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	There is no participatory planning as such. Occasionally some village youth are being promoted for conservation activities and eco-tourism initiatives.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	In the absence of an approved plan, Annual Plan of Operation is prepared annually and sent for funding and approval. Except for the year 2008-09 and 2009-10 no funding has been done probably due to want of approved Plan. Except 2000 mound plantation no other habitat restoration work has been done.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair			
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	Site is protected under provisions of WL (P) Act. However the strategy is entirely ad hoc.
Site has an adhoc protection strategy.	Fair			
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good			

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	Except for poaching (which is negligible), the conflicts on cultivation, fishing in reservoir was found. The staff is not posted exclusive for the sanctuary. The local attitude towards sanctuary although is not very friendly but not hostile. Community also boasts of birds' visit. Hence the human wild life conflict is not very rampant.
Site has been able to mitigate few human-wildlife conflicts.	Fair	✓		
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good			

* Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, Local people themselves) PR, follow-up actions and monitoring. Details of compensation paid for human injury/ death and property damage in the last 3 year may be collected.

2.9 Is the site integrated into a wider ecological network landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not integrated into a wider network/ landscape.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	Bihar is a transit area for migratory birds migrating from Himalaya to plains. All reservoir and water bodies attract these visitors. The site falls under such route. Another wetland Nagi Dam, 4km away, has also been declared a sanctuary and both together has been identified as an IBA site, situated in the Biogeographic Zone of Deccan Peninsula. However, for larger integration, declaration of eco sensitive zone is essential.
Some limited attempts to integrate the site into a network/ landscape.	Fair	✓		
Site is generally quite well integrated into a network/ landscape.	Good			
Site is fully integrated into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	The site is part of Jamui Forest Division. There is no separate staff posted for the sanctuary. The sanctuary is part of a sub-beat. Staffs looking after it are: - one RO, one Forester and one Forest Guard, who also look after other territorial area other than the sanctuary.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequate resources?

Assessment criteria*

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor	✓	Discussion with CF,DFO, information from APO and field visit	The PA has no resource available for scientific management. It requires boats. It has no cameras, binoculars, communication equipments. Except a Guard barrack there is no other building.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	In last 5 years only in 2008-09 and 2009-10 amounts of Rs.1.72 and 9.73 lakh respectively, was released. There is no sanction or allocation of funds in last 3 years (2010-11, 2011-12, and 2012-13). This is extremely pathetic condition. This condition has arisen probably due to the absence of an approved management plan, which is mandatory for sanction of funds by MOEF.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.4 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor		Discussion with CF, DFO, information from APO and field visit. Meeting with Sri Aravind Mishra, Mandar Nature Club and State Co ordinator, IBCN	Only one NGO, Mandar Nature Club is associated in the conservation of this area. It has documented the population as regards to its estimation and the bird species visiting the PA every year. There is no other local NGO involved.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

Details of contributions(cash/kind) made by the NGOs in the last 3 years may be collected.

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	As evident from the information provided in item 3.2 and 3.3, as well as found from discussions with PA Managers, there are very negligible resources available for the PA.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	Apart from DFO and ACF supervising whole division, there are 1 RO, 1 Forester and 1 FG in the PA, who also look after other areas. The RO has some basic knowledge of WL, being posted in Palamau TR. No other staffs have any WL training.
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No linkage
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.3 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No public participation.
Opportunistic public participation in some aspects of PA management.	Fair			
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good			

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor		Discussion with CF, DFO, information from APO and field visit.	There is no separate mechanism, except as exists for handling general complaints as per Govt. of Bihar's orders and procedures.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.5 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓	Discussion with CF, DFO, information from APO, field visit and interaction with some local people.	No programme for addressing livelihood issues has been introduced by PA Managers.
Few livelihood issues are addressed by PA management.	Fair			
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor		Discussion with CF, DFO, information from APO and field visit.	Road side signage, viewing points, hand bills, publicity materials are available. Listed in IBA site of India.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No tourist facility or trained guide is available. There is a forest rest house at Jhajha, available to tourists, if otherwise vacant.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with CF, DFO, information from APO and field visit and meeting with Sri Aravind Mishra, Mandar Nature Club and State Co-ordinator, IBCN Bihar.	Sri Aravind Mishra, MNC, Bhagalpur is estimating population. The Forest Range Officer also conducts the survey, but it is not systematic . It is more like the interest in avi fauna. No epidemics is reported.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	The fund available for infra-structure or any development work is very meager.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor	✓	Discussion with CF, DFO, information from APO, field visit and meeting with Sri Aravind Mishra, Mandar Nature Club and , State Co-ordinator, IBCN Bihar.	The population migratory birds fluctuate. There is no proper record to estimate the change.
Some threatened/ endangered species populations increasing, most others stable.	Fair			
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor		Discussion with CF, DFO, information from APO and field visit. Interaction with villagers.	There is no effective management intervention but villagers are cooperating in anti poaching activities. Due to want of clear demarcation and strict protection some villagers are alleged to be still cultivating and occasionally fishing in the sanctuary. 3 offence cases were booked in 3 years The situation may reverse if strict management is enforced.
Some threats to the Site have abated, others continue their presence	Fair	✓		
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good			
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No tourist facility is available
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.4 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with CF, DFO, information from APO and field visit.	Some of the local communities are supportive at present.
Some are supportive.	Fair	✓		
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good			

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	10	33.3%
2.	Planning	09	10	90	30	
3.	Inputs	05	10	50	15	
4.	Process	05	10	50	15	
5.	Outputs	04	10	40	15	
6.	Outcomes	04	10	40	15	
Total		30		300	100	

4. VIKRAMSHILA GANGETIC DOLPHIN WILDLIFE SANCTUARY, BIHAR, MEE Year (2012-13)

A. Management Strengths

1. The area is of very high conservation value. Apart from Gangetic dolphins, the site supports nearly 13 globally endangered bird species including the greater adjutant. The site has a very rich bird life. The gharial, smooth-coated otter, 1335 species of birds, 76 species of fish and 5 species of turtles have been reported from the area.
2. The Ganges is deep and wide in this part. The Farakka barrage is 145 km downstream of the sanctuary. Monadnocks (rock islands) induce large counter-current pools, which are the prime habitat of dolphins, at Sultanganj and Kahalgaon. Fish and crustaceans are abundant, supported by the existence of many side channels, in which fish spawn. All these render this sanctuary one of the best habitats for the endangered Gangetic dolphin (*Platanista gangetica gangetica*), which is present in good numbers.
3. Patna University and Bhagalpur University are close to the sanctuary and professors and scholars of these universities are carrying out research and survey activities in the sanctuary.

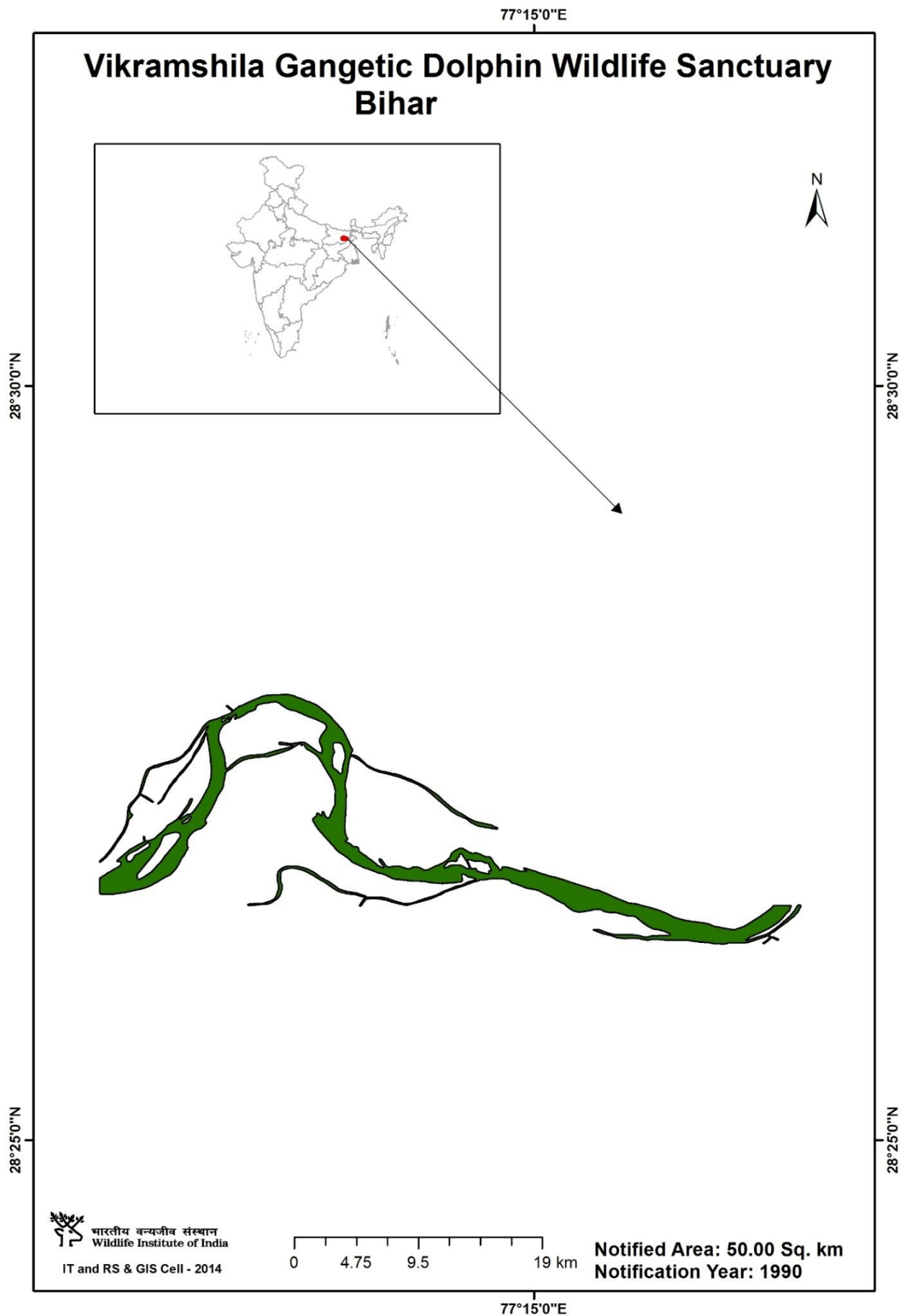
B. Management Weaknesses

1. The middle of the Ganges has been notified as a sanctuary. There is no buffer zone. Thus, the protected area is vulnerable without management of its ecological entities.
2. The sanctuary is under the control of Banka Forest Division, the headquarters of which are in the neighbouring district, at Banka. There is no separate staff for the sanctuary.
3. The PA has no management plan in place, and the resource allocation is scanty.
4. The area is highly prone to illegal fishing. Dolphins get caught in the gill nets used by the local fishermen. The fishing is not regulated strictly in terms of the mesh size of the net used in the outer channels.
5. Fish fry and fish eggs are collected upstream and in the side channels during the monsoon, reducing the stock of fish in the PA.
6. The movement of heavy boats is not regulated. A large number of other boats, especially motorized ones, are used for inland water transport and pose a threat to dolphins.
7. Large volumes of untreated sewage and pollutants are disposed of in Bhagalpur and Kahalgaon by discharging it into the sanctuary.

C. Actionable Points

1. The PA should be managed separately with an office and other infrastructure.
2. The staffing pattern of the sanctuary should be reorganized with personnel deployed exclusively for the sanctuary. Posting of trained staff members and an adequate number of watchers is required for patrolling.
3. At least three new fast boats need to be provided for patrolling.
4. Monitoring-cum-patrolling stations must be established.
5. Adequate financial resources should be allocated for management of the PA.
6. The river transport should be regulated.
7. The use of gill nets and collection of spawn must be banned.
8. The preparation and approval of a scientific management plan need to be carried out expeditiously.

9. Intense co-ordination with universities and institutions for research, survey and monitoring is required.
10. The buffer area and eco-sensitive zone should be declared.
11. The participation of the people in eco-development and eco-tourism initiatives needs to be ensured to address livelihood issues.
12. An effective and professionally designed interpretation programme should be developed to disseminate the values of the sanctuary to the people.
13. The effects of the disposal of waste water from the thermal power station at Kahalgaon need to be monitored.
14. The effects of sand dredging operations in the sanctuary need to be evaluated.



1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Discussion with CF, DFO, information from APO and from old plan.	Aout 60 km stretch of the river Ganges between Sultanganj to Kahalgaon was notified in 1991 as 'Vikramshila Gangetic Dolphin Sanctuary' to protect Gangetic dolphin. This sanctuary is located near Bhagalpur, Bihar, This stretch of the Ganges is very important since in the 20 km upstream towards west the river Budhi Gandak and about 15 km downstream in the east the river Kosi joins the Ganges. This part of the river being deep and wide with good fish and other aquatic fauna, has been recognised to be the best habitat for the endangered Gangetic Dolphin (<i>Platanista gangetica gangetica</i>). In addition to smooth coated otter, gharials and varieties of turtles, about 76 fish species and 135 species of birds have been reported in the sanctuary. The flood water from the Ganges renders the rivulets and nallhas draining into it, as very good breeding grounds of many varieties of fishes. Thus, the area is of very high conservation value. Although values have been generally recognised, these need to be systematically identified with specificity. They should be monitored in a pre-determined manner at regular intervals, which had to be laid down in the management plans.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historico-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussion with CF, DFO, information from APO and from old plan.	The Government of Bihar realising that the number of Gangetic dolphins has diminished to such an extent that the very existence of this species in danger and that it has become essential for protection, multiplication and development of this species, and further that maximum number of these animals are in the current of Ganges from Sultanganj to Kahalgaon; notified this stretch as a Wildlife Sanctuary ,vide S.O. no. 382 dated 22nd August , 1990 under Wildlife (Protection) Act, 1972. The habitat of Gangetic dolphin has been fragmented due to construction of no. of barrages and further threatened due to heavy fishing pressure. This species is categorized as 'Endangered' in the IUCN Red list. Fishing, Water transports by motorised boats, pollution from sewage disposal are the biggest threats. There is a thermal power station of NTPC, whose Waste Water parameters need to be monitored. The threats are identified but require to be assessed systematically and to be documented in the plan.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	Discussion with CF, DFO, information from APO and from old plan.	On either banks of the river / sanctuary there are large no. of villages, which cause a lot of biotic interference. The fishing, water transport, and sewage disposal to the river.
The site has some human and biotic interference.	Fair			
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	There is no concept of zonation. The middle of the river course has been declared as sanctuary.
Site identified correctly but not categorized.	Fair	✓		
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good			

Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor	✓	Discussion with CF, DFO, information from APO, from old plan and field visit.	No management plan exists. The old plan(2002-2006) expired in 2006. It was reported that request is made every year for its extension. The annual operations are carried out on that basis. The new plan is under preparation stage.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good			

Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	Discussion with CF, DFO, information from APO, from old plan and field visit.	Management plan expired in 2006 is under preparation stage.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	The draft MP has listed all the threats and remedial measure to be taken. Efforts are being made to form fishermen co-operative, regulation on pilgrimage, control on water transport, awareness generation, monitoring etc.
Sites safeguards a few threatened biodiversity values.	Fair	✓		
Sites safeguards a large number of threatened biodiversity values.	Good			
Sites safeguards all threatened biodiversity values.	Very good			

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.7 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Discussion with CF, DFO, information from APO, from old plan and field visit.	Not yet. The draft plan may include this exercise.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor	✓	Discussion with CF, DFO, information from APO, from old plan and field visit.	There is no comprehensive programme as such. The buffer zone is yet to be declared.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair			
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	The river stretch is patrolled by boats. Only 3 FG are manning the sanctuary with some daily wage staff. 4 court cases are pending in courts. There is no patrolling camp concept. The basic facilities of management are lacking.
Site has an adhoc protection strategy.	Fair	✓		
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good			

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor	✓	Discussion with CF, DFO, information from APO, from old plan and field visit.	Severe conflict of Sanctuary staff with fishermen and transportation boats. The infra-structure support is poor as well as man power. The fish spawn collectors are big threats to source populations.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good			

* Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, Local people themselves) PR, follow-up actions and monitoring. Details of compensation paid for human injury/ death and property damage in the last 3 year may be collected.

2.9 Is the site integrated into a wider ecological network landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not integrated into a wider network/ landscape.	Poor		Discussion with CF, DFO, information from APO, from old plan and field visit.	Gangetic river dolphins are globally threatened and discontinuously distributed in the Ganga-Brahmaputra- Meghna and Karnaphuli-Sangu river systems of South Asia from Himalayan foot hills to the Bay of Bengal. This sanctuary area is part of Gangetic river system and reported to be good breeding site with good concentration of dolphins. Only the middle course of river is declared as sanctuary.
Some limited attempts to integrate the site into a network/ landscape.	Fair	✓		
Site is generally quite well integrated into a network/ landscape.	Good			
Site is fully integrated into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	Only three FG are posted in the vast stretch who also look after other works of the division. There is no separate staff for sanctuary. The staffing pattern of the sanctuary should be reorganized with personnel exclusively deployed for the sanctuary.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts *vis-a-vis* existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequateresources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor	✓	Discussion with CF,DFO, information from APO and field visit	Two old unworkable boats and one GPS are the only resource available for PA. There is no separate office building, vehicle or any other facility.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	The total fund, both from plan and non plan schemes, allocated to PA in last three years for protection, threat assessment, awareness and research are as under:- 2010-11—8,64,500 2011-12—1,32,900 2012-13—1,64,000 The expenditure is 100%. From above it is clear that financial resources provided to the sanctuary is totally in sufficient.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.4 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor		Discussion with CF, DFO, information from APO and field visit. Meeting with Sri Aravind Mishra, Mandar Nature Club and , State Co-ordinator, IBCN Bihar; Dr.S.K. Choudhary, Chairman, SEAC, Bihar and Professor, Bhagalpur Univ.;and Dr. R.K.Sinha, Co-ordinator , Dolphin Research, Patna University.	The NGO, Mandar Nature Club has documented the number bird species and population estimates. Dr. Choudhary and his team have been involved in survey of threat perception and have also worked on conservation and bio monitoring of dolphins. Dr. R.K.Sinha and his team are involved in status survey and other conservation initiatives. Sri Subhasis Dey of Bhagalpur University is also associated for Fish and Fisheries Survey in 2011. The findings of these activities have not been translated into inputs of sanctuary management. The Management Plan in making should incorporate them.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

Details of contributions(cash/kind) made by the NGOs in the last 3 years may be collected.

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	As evident from the information provided in item 3.2 and 3.3, as well as found from discussions with PA Managers, the resources are very meager and insufficient.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No wildlife trained staff.
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No linkage
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.3 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor		Discussion with CF, DFO, information from APO and field visit.	Not much public participation. However, sometimes village level meetings are conducted for awareness. The local level committees are yet to be notified by the Govt.
Opportunistic public participation in some aspects of PA management.	Fair	✓		
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good			

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor		Discussion with CF, DFO, information from APO and field visit.	There is no separate mechanism, except as exists for handling general complaints as per Govt. of Bihar's orders and procedures.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.5 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓	Discussion with CF, DFO, information from APO, field visit and interview with fishermen.	No programme for addressing livelihood issues has been introduced by PA Managers.
Few livelihood issues are addressed by PA management.	Fair			
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor		Discussion with CF, DFO, information from APO and field visit.	Road side signage, viewing points, hand bills, publicity materials are available Listed in IBA site of India.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No tourist facility or no trained guide is available The PA provides its rest houses to tourists, if otherwise vacant
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with CF, DFO, information from APO and field visit. Meeting with Sri Aravind Mishra, Mandar Nature Club and , State Co-ordinator, IBCN Bihar; Dr.S.K. Choudhary, Chairman, SEAC, Bihar and Professor, Bhagalpur Univ.; and Dr. R.K.Sinha, Co-ordinator , Dolphin Research, Patna University.	The research works and monitoring are carried out by the help of Dr. R K Sinha from Patna Univ. and Dr. Choudhary and his team. There are some published papers. Fish and Fisheries Survey in 2011 was supported by the deptt. from CAMPA funds. Mandar Nature Club has documented the number bird species and population estimates. Socio-economic studies should be done.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	The fund available for infra-structure or any development work is very meager.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor		Discussion with CF, DFO, information from APO and field visit. Meeting with Sri Aravind Mishra, Mandar Nature Club and , State Co-ordinator, IBCN Bihar; Dr.S.K. Choudhary, Chairman, SEAC, Bihar and Professor, Bhagalpur Univ.; and Dr. R.K.Sinha, Co-ordinator , Dolphin Research, Patna University.	The population migratory birds fluctuates. The number of Dolphins reported to be on increasing trend. The figures of last survey of October, 2011 estimateed 223 dolphins (Adults- 139 ;Sub-adults- 67; Calves-15; Unclassed-2) in upstream and 164 in down stream. Previous year count was 180-200 (early dry season) to 210-260 (peak dry season). The survey during 2001-03 estimated 119.4±SD 31.8 (range: 88-174).
Some threatened/ endangered species populations increasing, most others stable.	Fair			
Most threatened/ endangered species populations increasing, most others stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor		Discussion with CF, DFO, information from APO and field visit. Meeting with Sri Aravind Mishra, Mandar Nature Club and , State Co-ordinator, IBCN Bihar; Dr.S.K. Choudhary, Chairman, SEAC, Bihar and Professor, Bhagalpur Univ.; and Dr. R.K.Sinha, Co-ordinator , Dolphin Research, Patna Univ.	Threats are well known. The protection provided by the territorial division staff is abetting some of the threats. However, all of them are not contained effectively due to poor management interventions, arising out of no separate staff, very little manpower, almost negligible infra-structure support and meager funding.
Some threats to the Site have abated, others continue their presence	Fair	✓		
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good			
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓	Discussion with CF, DFO, information from APO and field visit.	No tourist facility is available
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.4 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with CF, DFO, information from APO and field visit.	Some of the local communities are supportive at present.
Some are supportive.	Fair	✓		
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good			

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	12.5	37.5%
2.	Planning	09	10	90	32.5	
3.	Inputs	05	10	50	15	
4.	Process	05	10	50	17.5	
5.	Outputs	04	10	40	15	
6.	Outcomes	04	10	40	20	
Total		30		300	112.5	

5. GAUTAM BUDDHA WILDLIFE SANCTUARY, BIHAR

MEE YEAR (2015-16)

Management Strengths

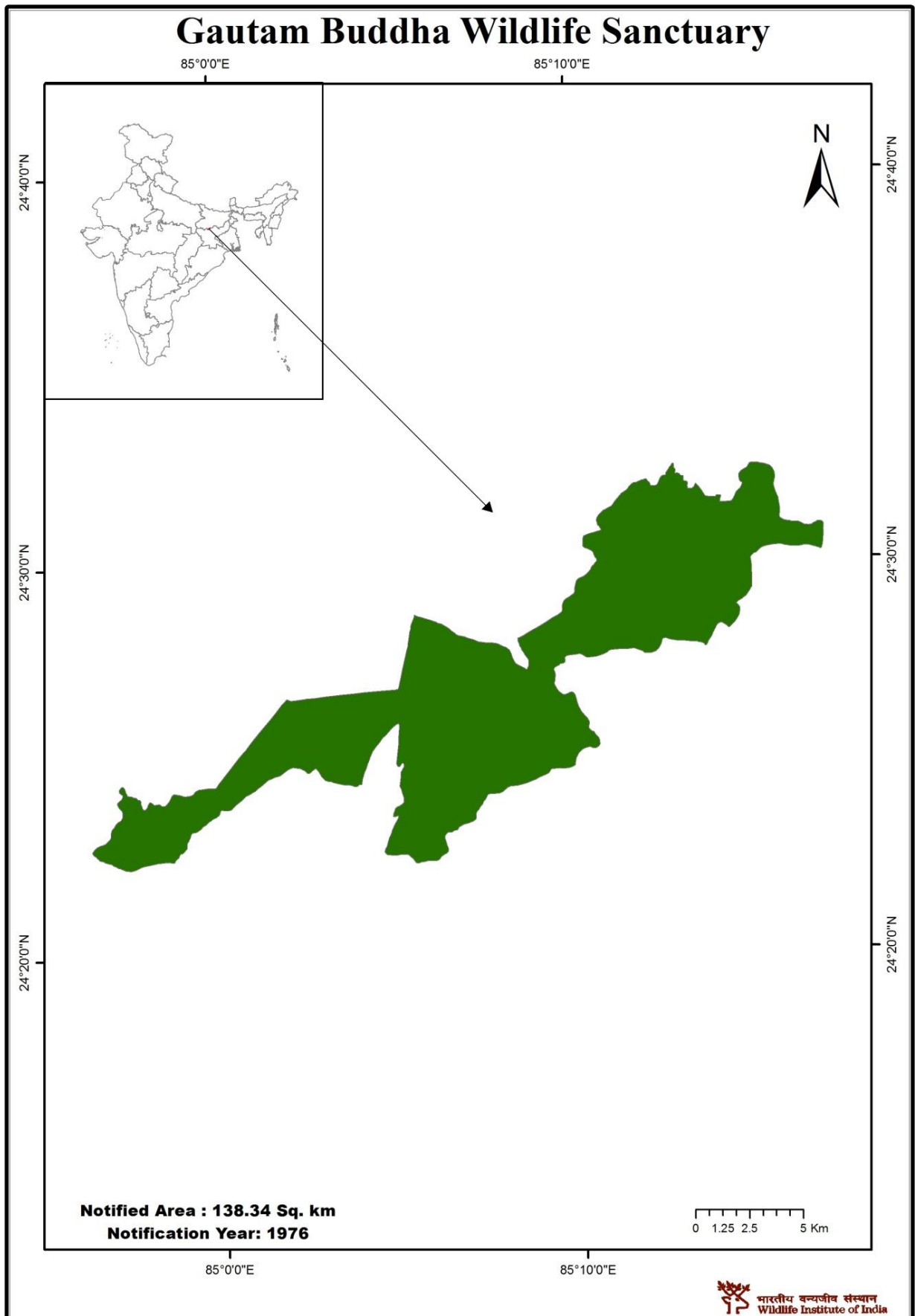
1. Although no attempt has ever been made to write a management plan for the sanctuary, the latest working plan of Gaya Division, in operation from 1980–1981 to 1999–2000, clearly indicates that the forests around Dhanua and Bhalua are rich in wildlife. The existence of at least two tigers in the area was recorded during a census conducted in 1978. Despite the fact that sanctuary is disturbed by the presence of a National Highway and a large number of villages, the area was always found to be rich in wildlife in the past.
2. The habitat of the sanctuary provides the catchment areas for two major rivers and many tributaries and rivulets. Except for the river Mohane, the water sources dry up in late winter and summer. The Mohane is the lifeline for many villages, at least during summer. The sanctuary has very important value, and therefore it must be protected at all costs.
3. Some spots in the forests and some trees are considered to be of religious significance, and villagers ensure that no harm is done to these patches, which helps protect the sanctuary.
4. The forests and wildlife are said to be enjoying better protection in such circumstances. The local villagers preserve all trees, especially fruit-bearing species such as *chiraunji*, *mahua* and *bel*. The villagers report that Naxalites leave only dead and fallen trees for consumption by the village.
5. The plantations raised in the interior areas are very good, as no one ever dares to destroy these plantations, fearing Naxalites.

Management Weaknesses

1. The sanctuary is managed as two territorial ranges of Gaya Forest Division, namely Barachatti Range and Gurupe Range. Ninety-five percent of the sanctuary falls in Barachatti Range, and the remaining 5% falls in Gurupe Range. In addition to these, both ranges also have other forest areas of the Territorial Division. An exclusive focus on wildlife is, therefore, missing. The presence of a National Highway and 33 villages in Barachatti Range and four villages with large human and cattle populations in Gurupe Range is a threat to the sanctuary. The disturbances make protection very difficult. No under-passes have been provided for wild animals to cross the National Highway.
2. The Bihar Government has not recruited RFOs, Foresters and forest guards for more than a quarter century. Many posts at the crucial level are lying vacant, which is a very big challenge for the protection of the sanctuary. Whatever recruitments are made, are made on compassionate grounds, and the personnel remain untrained. It is heartening to note that some recruitment of forest guards is in the pipeline.
3. There are only one Forester and two forest guards for the protection of the sanctuary. The jurisdiction of these persons extends to the forest areas beyond the sanctuary.
4. The forest staffs managing the sanctuary are not trained in wildlife management. They do not understand the behaviour of the wild animals and are not conversant with their signs.
5. Disturbance due to Naxalites, heavy grazing by the cattle present in the sanctuary, collection of fuelwood and dependence of people on the forests, especially fruit-bearing species such as *mahua*, *chiraunji* and *bel*, are important issues to be addressed by the management. Solving some of these issues is beyond the scope of the Forest Department.
6. The sanctuary has no wildlife management Plan and as a result, all habitat improvement works are approved by the Chief Wildlife Warden on an annual basis. During the field inspection, it was noticed that the works are implemented without proper application of the mind: for instance, water holes were constructed close to the perennial river. The water holes visited in the Tetaria and Sankhawa protected forests were found to be technically defective. Attempts have been made to create wells to tap the subsurface water, but the Conservator of Forests Gaya is of the opinion that all the water holes will have to be supplemented during summer. Natural drains were found to have been disturbed when constructing these water holes. Dams need to be constructed across important tributaries and rivulets to impound water so that it will last longer. The area chosen for grassland development has the root stock of miscellaneous species. Also, many village cattle were found grazing in this area. We find that this patch is unsuitable for grassland development.
7. Old records suggest that the area was rich in wildlife once, but during our visit to some of the patches in the sanctuary, we did not come across adequate evidence supporting the presence of wild animals.

Actionable Points

1. The state government should find a competent person/agency and outsource the writing of the management plan of the sanctuary. The DFO Gaya is overworked, and he will not be able to do justice, if he is entrusted with this work. It is better to coordinate with the state of Jharkhand and draw up an integrated management plan for the sanctuary that involves both states.
2. The state government should hasten up the process of recruitment and providing training to staff. A routine exercise has to be introduced through which the fitness of all staff members is maintained/ enhanced. Unless they are able to take up aggressive patrolling in the forests, the conservation of the forests and wildlife will be threatened.
3. Modern geospatial tools need to be used for the complex task of collecting baseline biodiversity data and information. Appropriate capacity building initiatives are needed.
4. In addition to present staff, the sanctuary should be provided with some protection forces and anti-poaching camps. If a force is stationed at Bhaluachatti, it can be rushed to any part of the sanctuary to conduct raids on poachers and smugglers.
5. The habitat improvement programmes require more application of mind on the part of the DFO and CF. Selection of sites for check dams, gully plugs and water holes and the design of these structures require proper probing in the field. No water hole needs to be constructed to tap subsurface water when the storage is to be supplemented during summer. Under no circumstances should natural drains in the area be disturbed. Tributaries and rivulets may be dammed with properly designed waste weirs for discharge of the overflow. Similarly, experts should be consulted for selection of sites and choosing local species for grasslands.
6. The question of alternative livelihood options for forest resource-dependent communities must be addressed. During our discussion with EDC members, we observed that communities are willing to help the Forest Department with protection of the forests and wildlife. Many EDCs were established in the past, which have become defunct. The only EDC that was found to be functional was established recently. EDCs require support from the Forest Department in the early stages.
7. A sufficient number of under-passes of appropriate design should be built across the National Highway to allow wild animals to cross from the northern part of the sanctuary to the southern part and vice versa.
8. There is evidence of degradation of forests due to fire in some parts of the sanctuary. Correct fire protection measures should be an important component of the management of the PA.



1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor	✓	DFO report, Working Plan, Gaya Forest Division(1980-2000)	1. There is no Management Plan of the PA. 2. Some values are described in old working plan. The important being importance of landscape, the diversity in forests and wildlife of the area, Hydrological values etc. However these are not systematically assessed, documented and monitored.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historical -cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	✓	DFO report, Working Plan, Field visit and interactions	1. There is no record maintained where threats are identified. Management plan was never attempted to be written. 2.The MEE committee could assess the major threats as presence of Naxalites, grazing, fire, encroachments, NH2 passing through sanctuary, presence of villages, inadequate staff and trained protection force .These threats are impacting habitat and wildlife
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	DFO report, Field visit	1. Thirty seven villages with about 45000 cattle and approx...400house holds depend upon this sanctuary for all their domestic need as well as livelihood option 2. The families and other establishment along the NH2 also exert additional pressure on forests of sanctuary
The site has some human and biotic interference.	Fair			
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor		DFO report. Field Visit	1. The site is not categorized in to zonation. There is no management prescription or any other document which deals with Zonation.
Site identified correctly but not categorized.	Fair	✓		
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good			

Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor	✓	DFO report	There is no management plan of the sanctuary. The current management is based on ad hoc schemes which are formulated annually and approved by Chief Wildlife warden.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good			

Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	DFO Report	Management Plan has not been attempted to be written even once. Where is the question of updating?
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor	✓	DFO report, old Working Plan	1. The site has the connectivity with Chatra and Koderma forests and is rich in biodiversity. 2. The current management has little to safe guard the biodiversity values.
Sites safeguards a few threatened biodiversity values.	Fair			
Sites safeguards a large number of threatened biodiversity values.	Good			
Sites safeguards all threatened biodiversity values.	Very good			

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.8 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	DFO report and field interaction	Nothing is available on the ground to conclude that stake holders participate in planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor		DFO Report, Field Visit especially that of water holes and grass land	1. The habitat restoration through watershed approach has been planned for the forest Division. The advance work for RDF in 150 acres is in progress. 2. Thirty nos. of waterhole and 50 ha. Of grassland were created in 2014-15 and 1015-16. However, these water holes are found to be technically defective. Site selected for grassland is also inappropriate. Senior officers have failed to apply their mind in planning and implementing habitat improvement works.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair	✓		
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor	✓	DFO Report and Field visits	1. There is no protection strategy in the PA. 2. There is no regular patrolling mechanism in the PA. 3. The paucity of staff, infra-structure and several other threats like Naxalites are the major constraints 4. Government of Bihar have not recruited Forest Guards, Foresters and Range Officers for more than 25 years..
Site has an adhoc protection strategy.	Fair			
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good			

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor	✓	DFO Report	1. There is no mechanism to control conflicts. 2. No staff is trained in wildlife, no equipment for wildlife monitoring is available. 3. The crop compensation was paid on elephant depredation three years back. 4. The coordination with other departments and public is not found to be proper 5 .One sloth Bear, Four Chitals and one Blue bull were rescued by the staff in the division.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good			

* Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, Local people themselves) PR, follow-up actions and monitoring. Details of compensation paid for human injury/ death and property damage in the last 3 year may be collected.

2.9 Is the site integrated into a wider ecological network landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not integrated into a wider network/ landscape.	Poor		DFO Report, Old Working Plan, Field Visits	1. The Sanctuary is a part of a wider network/ landscape connectivity as identified in the working plan of the Forest Division. 2. There is no coordination with District administration and other sister departments.
Some limited attempts to integrate the site into a network/ landscape.	Fair	✓		
Site is generally quite well integrated into a network/ landscape.	Good			
Site is fully integrated into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	DFO report, Interaction with Field staff	1. There is no separate staff for PA. The PA area falls in two territorial ranges of Gaya FD. 2. There is 90% vacancy in Forest Guard level. 3. There is no concept for patrolling camps/ stations. 4. The staff is very less and ill equipped for wildlife management.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with access to adequate resources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor	✓	DFO report, Field level meetings	Although the sanctuary was managed in Wildlife division between 1986 and 2002, but there is hardly any exclusive infrastructure for Wildlife Protection is the most important aspect in Sanctuary management, but it is not given any importance in this case. Recruitment of frontline staff should take place on regular basis, but Government of Bihar has neglected it for more than 25 years
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	DFO report	1.The Gaya FD received- A-under RDF- Rs.30.40 Lakh and Rs.2.36 lakh in 2014 & 2015 session B- under wildlife Improvement Plan- Rs.18.30 Lakh for waterhole management in 2014-15. Rs.15 Lakh for 50 ha. Grassland management in 2014-15-16. 2. There is no fund available for any other wildlife management activities.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.4 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor	✓	DFO report	There is no involvement of any NGO in any activity in the sanctuary.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

Details of contributions(cash/kind) made by the NGOs in the last 3 years may be collected.

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	DFO report	The sanctuary management has to start from scratch. The resources are to be built up and then only the sanctuary can be safeguarded.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	DFO report	No staff is trained in wildlife management
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor	✓	DFO report	There is no such linkage
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.3 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor	✓	DFO report, Interaction with staff	There is no public participation in management.
Opportunistic public participation in some aspects of PA management.	Fair			
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good			

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor	✓	DFO report and field visit	There is no such system
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated	Very good			

system and timely response provided with minimal repeat complaints.				
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* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.5 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓	DFO report, Field visit and interaction with one EDC.	At present no livelihood issues related activities are being taken up by sanctuary management.
Few livelihood issues are addressed by PA management.	Fair			
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor	✓	DFO Report, Field Information	No such mechanism developed. The Sanctuary is listed under Bihar state forest and wildlife web site.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	DFO report and field visit	1. The only rest house is under repair. 2. The old watch towers and tourist infrastructures created in the past are in depilated condition, as these structures are not maintained due to increase in Naxalite activities. Moreover, visitors always fear from Naxalites and do not prefer to visit the sanctuary
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		DFO report	1. A brief report on 7 days survey of flora (2014), conducted by Sri Anand Kumar, BSI is the only work which is documented. 2. No census or monitoring of wildlife is conducted.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor	✓	DFO report	1. There is no exclusive fund for sanctuary. It is managed as part of Gaya Forest Division. 2. Government of India has suspended any release of fund for the management of this sanctuary for a simple reason that Management Plan is not in place
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor	✓	DFO Report, Field Visit	1. It is difficult to assess the trend in absence of any previous report in terms of baseline data. However, the team observed animal signs of wild boar, Sloth Bear, leopard scat, Barking deer. 2. Elephants also visit the area from Jharkhand side.
Some threatened/ endangered species populations increasing, most others stable.	Fair			
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor	✓	DFO report, Field Observation	1. The threats are increasing, as there is no management intervention in the sanctuary. 2. The villagers reported that Naxalites are protecting the forest and wildlife by not allowing any green felling and animal poaching.
Some threats to the Site have abated, others continue their presence	Fair			
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good			
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓	DFO report	There are no visitors in the sanctuary
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.4 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		DFO report, EDC meeting with the team	The EDC want to protect forest and wildlife but all EDC activities are suspended for want of fund.
Some are supportive.	Fair	✓		
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good			

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	7.5	29.16%
2.	Planning	09	10	90	30	
3.	Inputs	05	10	50	12.5	
4.	Process	05	10	50	12.5	
5.	Outputs	04	10	40	12.5	
6.	Outcomes	04	10	40	12.5	
Total		30		300	87.5	

6. KUSHESWAR ASTHAN WILDLIFE SANCTUARY, BIHAR

MEE Year (2017-18)

Management Strengths

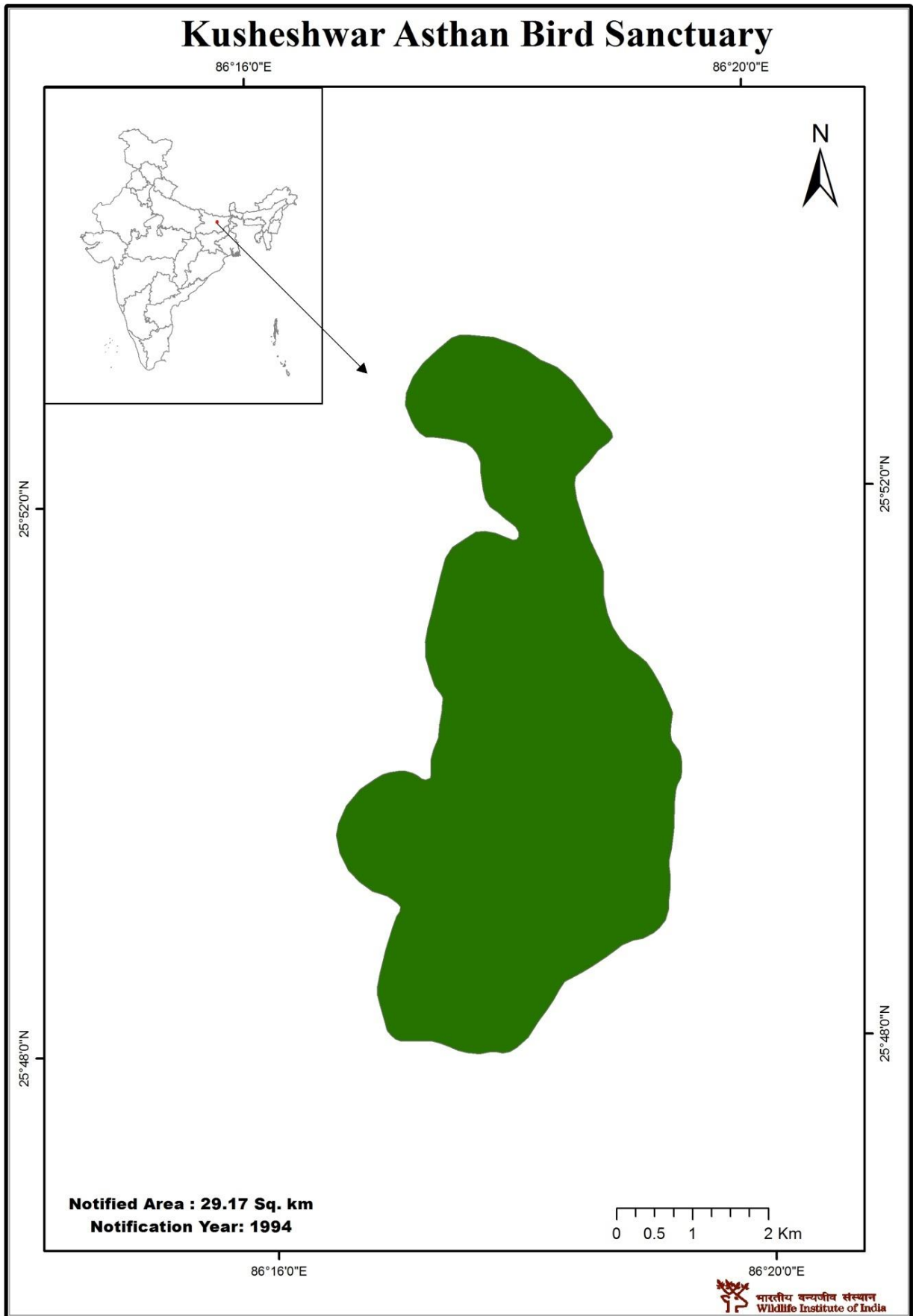
1. The sanctuary receives many migratory birds during winter every year.
2. The Kusheswar Asthan Shiva temple is very famous and attracts many devotees round the year. These devotees could be tourists of the sanctuary in winter, provided proper facilities visits and staying are developed.
3. The sanctuary could be an ideal place for researchers doing research on various aspects.

Management Weaknesses

1. The Government of Bihar has not recruited Foresters and Forest Guards in the last 3 decades. Many positions across the state are lying vacant. Though some trackers are engaged in the protection of birds in this sanctuary part time, but their numbers are never enough to keep the illegal activities in check.
2. Fishing is rampant in Mahamari Lake and Ashman Lake. These lakes are supported by the water overflowing from the Kamala River. The lakes swell between June and September due to the large quantity of water coming in from Nepal. As a result, the protection strategies need to be strengthened.
3. There are 14 villages in the sanctuary. There are very dense human and cattle populations in the sanctuary. As the sanctuary is on revenue land and private holdings, it is very difficult to implement the Wildlife (Protection) Act 1972 in its true spirit.
4. The work of construction of a railway line from Sukari to Kusheswar Asthan through the sanctuary is in progress. The railway line is proposed to be extended to Khagaria and on to Saharsa. This is being done without the approval of the National Board for Wildlife. Also, an environment impact assessment has not been carried out. The construction of an embankment for laying the rails, without a provision for the passage of water is likely to disturb the wetland. This will in turn damage the habitat of the migratory birds.

Actionable Points

1. The state government should commence recruitment of Foresters and Forest Guards. Unless trained personnel are available, protection and monitoring of wildlife will not be implemented properly.
2. Fishing and hunting of birds in the sanctuary are illegal. Education and awareness campaigns are necessary to bring such illegal activities to a halt.
3. The trackers who are being engaged as part time staff require training in wildlife subjects. They also require training in legal matters. In view of the vastness of the area, their numbers also need to be increased.
4. The state wetland authority should immediately take over the management of the sanctuary, which has been neglected.
5. Pockets of wetlands are to be identified, not only for the migrant birds but also as a natural stocking ground for fishes. This may help shift the pressure of catching fish to these identified pockets.



1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor	✓	1. The management Plan of the sanctuary is not available. It was reported by DFO that preparation of the plan has been outsourced to WII, Dehradun and it is awaited. 2. The DFO provided a single document about the PA that is Management Action Plan of Kusheswar Asthan Wetland 2005-06 to 2009-10. Even this plan has not been implemented.	1. The action plan has documented and assessed the wetland flora and fauna value only. (Chapter-3 pp 09—11).
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historic-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Action Plan 06 to 2010. Chapter-7 pp 16 to 17.	The threats are identified but not systematically assessed..
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	Field visit, interaction with DFO and staff	14 villages are inside sanctuary. The population density is very high and village folk depend on cultivation, fishing, and trapping of birds. The population of the villages had traditional right over fishing, grazing etc. even prior to notification of the sanctuary. The sanctuary is notified without extinguishing the rights..
The site has some human and biotic interference.	Fair			
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihooddependence of local communities and should reflect the overall interference due to all the abovefactors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor	✓	Action plan 2006-10	There is no demarcation of Zones in this sanctuary. Old action Plan is the only document available, where no categorization of area is indicated.
Site identified correctly but not categorized.	Fair			
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good			

Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor	✓	Interaction with DFO	The Management Plan of the sanctuary is outsourced to Wildlife Institute of India, which has still not come out.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good			

Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	Interaction with DFO	Even the first ever management Plan is not in place. The question of revision would arise later.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the site safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Sites does not safeguard the threatened biodiversity values.	Poor	✓	Interaction with staff, ROF and DFO	The PA is part of Mithila Forest Division. There is no separate staff for the sanctuary. Three casual staff engaged for patrolling and other workslike removal of weeds etc in PA.
Sites safeguards a few threatened biodiversity values.	Fair			
Sites safeguards a large number of threatened biodiversity values.	Good			
Sites safeguards all threatened biodiversity values.	Very good			

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.9

Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Interaction with DFO and staff	The management has not developed a system of consultation with local communities whose livelihood depends upon the sanctuary.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6

Are habitat restoration programme systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor			There are hardly any development works planned in the sanctuary. However DFO Darbhanga takes up de-weeding work in the water body occasionally.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair	✓		
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor	✓	Interaction with DFO and staff	The sanctuary being in the middle of private holding, the instances of trapping of birds and fishing is rampant. In fact this was the traditional right of the community in the past and the same has not been extinguished. Three casual workers do the patrolling and try to prevent bird trapping etc.
Site has an adhoc protection strategy.	Fair			
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good			

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor	✓	Interaction with DFO and staff, field visit	No injury of any kind is caused to human in this sanctuary. Resource dependent communities do fishing and trapping of birds and damage wildlife of the sanctuary. The human wildlife conflict in this sanctuary is one sided.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good			

* Judgment needs to consider staff training, capabilities, equipment, logistics, local attitude and politics (negatively aided and/or abetted), assistance of relevant agencies (e.g. police. Local administration, Local people themselves) PR, follow-up actions and monitoring. Details of compensation paid for human injury/ death and property damage in the last 3 year may be collected.

2.9 Is the site integrated into a wider ecological network landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Site not integrated into a wider network/ landscape.	Poor	✓	Action plan document, field visit	The site is well recognized in ornithological map of India and visited by several scientist and experts. It is considered as first stop over of Himalayan birds descending towards south. Sanctuary being in the migratory route of Himalayan birds, it has to be integrated in wider ecological network.
Some limited attempts to integrate the site into a network/ landscape.	Fair			
Site is generally quite well integrated into a network/ landscape.	Good			
Site is fully integrated into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Interaction with DFO and staff	There are no exclusive staff for the sanctuary. The fresh recruitment of Forest Guards and Foresters has not been taken up in the state of Bihar for past three decades. Three daily wagers are on duty during winter migratory season.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts *vis- a- vis* existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequate resources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor	✓	DFO and Staff interaction	There are no vehicle, equipment and building for exclusive management of the sanctuary.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable(structures) and movable categories and each further may be considered under the essential anddesirable categories. It is best to start with what are the minimum needs to attain each objective,what is available and manner of use/deployment. The proportions of the 'essentials' and'desirables' along the importance gradient of objectives would serve as pointers for scorecategories. Specific remarks would be vitally important.

3.3 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds areinadequate and seldom released in time andnot utilized.	Poor	✓	DFO and staff interaction	Human and financial resources are inadequate for the management of the sanctuary.
Some specific allocation for management ofpriority action. Funds are inadequate andthere is some delay in release, partiallyutilized.	Fair			
Comprehensive planning and allocation thatmeets the most important objectives.Generally funds released with not much delayand mostly utilized.	Good			
Comprehensive planning and allocation ofresources for attainment of most objectives.Funds generally released on-time and arefully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years andindicate them under 'Remarks'. Also comment on the problems associated with funds and theirmitigation.

3.4 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor	✓	DFO and staff interaction	There is no NGO support for PA.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

Details of contributions(cash/kind) made by the NGOs in the last 3 years may be collected.

3.5 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	DFO and ROF interaction	Human and financial resources are inadequate. As PA is managed by a DFO in charge of Darbhanga Afforestation Division, the focus on wildlife management is missing.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	DFO and staff interaction	There are no permanent staff for the management of the sanctuary.. There are only three trackers, who are untrained and are engaged in protection work and de-weeding.
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories.i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

4.2 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor	✓		Nil
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.3 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor	✓	DFO and staff interaction	Neither there is any system of public consultation nor resource dependent stake holders participate in management planning.
Opportunistic public participation in some aspects of PA management.	Fair			
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good			

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.4 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor	✓	DFO and staff interaction	No such system in place.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.5 Does PA management address the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓	DFO and staff interaction, field visit	The communities have been enjoying fishing rights prior to the notification of the sanctuary. These rights have not yet been settled yet. The question of addressing livelihood issues to resource dependent communities including women does not arise.
Few livelihood issues are addressed by PA management.	Fair			
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor			There is a display board of the sanctuary. The PA is listed in Bihar Gov.web site.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Field visit	The PA has no separate office or any facility for tourist.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists (both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Discussion with RO during field visit	Some researchers visit the area for documentation of birds. But there are no reports/ research paper available in the custody of Division office/ range office.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks

No systematic inventory or maintenance schedule.	Poor	✓		There are hardly any infrastructure/ assets created for the management of the sanctuary. There is thus no requirement of maintenance schedule so far..
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor	✓	Discussion with DFO	Management has not taken any monitoring program to find the status of threatened species. Nor any NGO has come forward to carry out any monitoring exercise.
Some threatened/ endangered species populations increasing, most others stable.	Fair			
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor	✓	Field visit, local interaction.	There are no records to conclude the threat perception. With the rise in human population the threats are increasing.
Some threats to the Site have abated, others continue their presence	Fair			
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good			
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks

Expectations of visitors generally not met.	Poor	✓		There are no register to maintain on the site, which discloses the comments offered by visitors.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.4 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor	✓	DFO and ROF interaction	There is no system of consultation with stake holders. Local communities do have rights on the fishing resource prior to the notification issued for the sanctuary. Forest management is also weak as there are no trained staff. The daily wage watchers do not come in conflict with the communities.
Some are supportive.	Fair			
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good			

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	10	27.5%
2.	Planning	09	10	90	25	
3.	Inputs	05	10	50	12.5	
4.	Process	05	10	50	12.5	
5.	Outputs	04	10	40	12.5	
6.	Outcomes	04	10	40	10	
Total		30		300	82.5	

7. Dr. Salim Ali Jubba (Barela Jheel) Sahni Bird Sanctuary, Bihar MEE Year (2017-18)

Management Strengths

1. Barela Jheel, a large water body has influenced the hydrology of the area and the water regime. The protected wetland recharges the water table of the surrounding areas. Barela Jheel provides livelihood opportunities to a large number of local people in the form of fishing and seasonal cultivation, and thus it is of direct significance for them. The adoption of livelihood practices suitable for the area such as pisciculture is likely to become a major strength in conserving the wetland. This sanctuary is home to a large number of local and migratory birds. The area has immense potential for eco-tourism.

Management Weaknesses

1. The human density of the area around the sanctuary is very high. Thus there is a high community dependence on the resources of the wetland. The limited staff strength and the inadequate infrastructure is detrimental to the management of the sanctuary, including the protection capabilities. The lack of visitor facilities affects the overall tourism potential of the area.

Immediate Actionable Points

1. The present staff strength to manage the sanctuary is grossly inadequate. The Government of Bihar needs to recruit young staff members and deploy them for enhancing the protection of the area.
2. The infrastructure of the sanctuary, such as anti-poaching camps and watchtowers, needs to be developed.
3. The sanctuary has excellent eco-tourism potential. Local youths need training in bird watching and can be involved in a community-based tourism programme.
4. Development of facilities such as an interpretation center, signage and tourist accommodation will boost the tourism potential of the area.
5. Small private wetland patches are present within the sanctuary or on the boundary. These wetlands need to be acquired/ purchased. Land use practices compatible with wetland management, such as pisciculture, are being encouraged. These should be taken up on a priority basis as eco-development activities to ensure the integrity of the sanctuary.

Dr. SALIM ALI JUBBA (BARELA JHEEL) SAHNI BIRD SANCTUARY, BIHAR

1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Management Plan	Values have been identified in the management plan.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good	✓		

*Values would also include geo-morphological, historico-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Management Plan	The management plan elaborates on threats to site values.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	Management Plan	Dependence of local communities on wetland resources are high. The wetland is subjected to intense fishing by local communities.
The site has some human and biotic interference.	Fair		MEE team field notes	
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category+	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor		Management Plan	Though the site has been properly demarcated, owing to the small extent of the area, zonation has not been carried out.
Site identified correctly but not categorized.	Fair			
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good	✓		

*Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category+	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor		Management Plan	An approved and updated management plan of the area is available.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good	✓		

*Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor		Management Plan	The management plan of the area is developed with adequate scientific inputs.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good	✓		

2.4 Does the management plan elaborate on safeguarding the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not safeguard the threatened biodiversity values.	Poor		Management Plan and field inspection.	Management plan elaborates on protection of threatened biodiversity values through appropriate theme plans.
The plan safeguards a few threatened biodiversity values.	Fair			
The plan safeguards a large number of threatened biodiversity values.	Good			
The plan safeguards all threatened biodiversity values.	Very good	✓		

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.5 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussions with DFO, Vaishali	EDCs are in place in the sanctuary. Regular meetings with EDC members are held.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor		Management Plan	Mounds have been made in the wetlands and trees have been planted to provide perching sites for birds.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair			
Habitat restoration programmes are generally well planned and monitored.	Good	✓		
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor		Management Plan.	The wetland is being managed in consultation with stake holders, specially the local communities.
Site has an adhoc protection strategy.	Fair			
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good	✓		

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Does the management plan integrate the site into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not integrate the site into a wider network/ landscape.	Poor		Management Plan	The wetland is an isolated patch and is surrounded by human dominated landscape. Available wetland area has been well protected and managed.
The plan makes some limited attempts to integrate the site into a network/ landscape.	Fair			
The plan integrates the site generally quite well into a network/ landscape.	Good	✓		
The plan fully integrates the site into a wider network/ landscape.	Very god			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Discussion with DFO.	Staff strength is inadequate.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			

Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts *vis- a- vis* existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	Discussion with DFO	Inadequate staff strength is a serious impediment for effective PA management.
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

3.3 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequate resources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor		Discussion with DFO	Adequate resources are not available for the sanctuary.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.4 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with DFO	Limited funds are available for sanctuary management.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.5 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor	✓	Discussion with DFO	No NGO is contributing resources to the PA at present.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

*Details of contributions (cash/kind) made by the NGOs in the last 3 years may be collected.

3.6 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	Discussion with DFO	Lack of staff and timely financial support for the sanctuary are limiting factors for effective management.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor		Discussion with DFO	Despite poor staff strength and financial support, existing staff is highly motivated and performing well to achieve management plan objectives.
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.2 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor		Discussions with DFO and local records available.	Public participation in PA management is regular, mostly in the form of protection of wetland and control of poaching.
Opportunistic public participation in some aspects of PA management.	Fair			
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good	✓		

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.3 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor		Discussion with DFO and local communities	No hostility among local communities to park management was noticed during the visit in spite of extensive resource utilization.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.4 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor		EDC register	All employment through forestry works are carried out with active participation of EDC members.
Few livelihood issues are addressed by PA management.	Fair	✓		
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor		www.forest.bih.nic.in	Information on the sanctuary is available on official website of Bihar Forest Department. Besides, information on Barela Jheel is also available in internet.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good	✓		
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Observations during the field visit.	Tourist facilities are meagre and no interpretation centre exists.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Discussion with DFO and Management Plan	Basic information of flora and fauna are available in the management plan of the area.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Management Plan	Maintenance schedule exists in management plan, funds are a limitation and periodically provided.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor		Management Plan	Baseline information on key faunal species is available for comparison.
Some threatened/ endangered species populations increasing, most others stable.	Fair	✓		
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor		Management Plan and observations during the field visit.	The wetland is subjected to intense human use for fishing and agriculture during dry season. However, this has not altered the characteristic of the wetland.
Some threats to the Site have abated, others continue their presence	Fair	✓		
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good			
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor		Management Plan	Human wildlife conflict is non-existent in the area.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good	✓		

* Details of compensation paid for human injury/ death and property damage in the last 3 years may be collected.

6.4 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓		Small number of tourists visit the wetland for bird watching.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.5 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with local communities	No hostility among local communities towards park management was observed during the site visit.
Some are supportive.	Fair			
Most locals are supportive of PA management.	Good	✓		
All local communities supportive of PA management.	Very good			

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	20	65%
2.	Planning	08	10	80	75	
3.	Inputs	06	10	60	20	
4.	Process	04	10	40	30	
5.	Outputs	04	10	40	20	
6.	Outcomes	05	10	50	30	
Total		30		300	195	

8. BHIMBANDH WILDLIFE SANCTURAY, BIHAR

MEE Year (2017-18)

Management Strengths

1. Bhimbandh Wildlife Sanctuary, spread over an area of 680 km², is a large ecological forest in the Kharagpur Hills of Bihar.
2. The unique geological characteristic of the area is reflected in the presence of numerous hot springs.
3. The sanctuary has an approved management plan. The natural beauty of the area, along with the hot springs, has the potential to make Bhimbandh an ideal ecotourism destination in Bihar.
4. The forests of Bhimbandh are of great religious and mythological significance for the local communities, and they are extremely supportive of conservation. Besides, the forests of Bhimbandh act as a major catchment of water in the region.
5. In spite of having to contend with Left Wing Extremist Activities (LWEA), the management has shown determination to protect the sanctuary.

Management Weaknesses

1. The presence of LWEA for several years in the area has been detrimental to the wildlife management, thereby affecting not only the tourism potential of the area but also all aspects of sound wildlife management. Exploiting this situation, there have been illegal mining, illegal extraction of timber and fuelwood and illegal encroachments, affecting the biodiversity of the area.
2. The lack of an adequate number of staff members is a major constraint faced in managing the sanctuary. Now with a significant paramilitary presence in the sanctuary, the management has resumed its activities in the forest.
3. The sanctuary is subjected to extreme biotic pressure due to the presence of 29 villages inside the sanctuary and 434 villages within 3 km from the boundary of the sanctuary.
4. The entire infrastructure of the park, including patrolling camps, staff quarters, rest houses and forest roads, needs to be rebuilt entirely.

Immediately actionable points

1. The staff strength available for managing the sanctuary is grossly inadequate. The Government of Bihar needs to recruit young staff members and place them in their respective positions so as to make the protection strategy effective for the sanctuary.
2. The infrastructure of the sanctuary, such as forest roads and buildings (forest rest houses, quarters) need to be rebuilt in order to facilitate better management of the area.
3. The local people are willing to join hands with the management to conserve the area. This is evident from the excellent soil and moisture conservation activities being carried out in many parts of the buffer area of the park with the active participation of local communities. Considering the fact that there is a large human population in the periphery of the sanctuary, a strict protectionist approach may not be very effective. The participation of the local communities in the rebuilding of the park and reducing biotic interference is mandatory.
4. Once the LWEA are controlled and the sanctuary is well staffed, systematic patrolling and monitoring activities can be initiated.

5. A systematic and scientific population estimation is required to understand the wildlife abundance of the area, which appears to be low. Appropriate measures such as intensive management of habitats and supplementation of prey populations may be undertaken based on the extent and distribution of wildlife population.
6. Bhimbandh Wildlife Sanctuary has tremendous ecotourism potential. Development of facilities such as an interpretation centre, signage and tourist accommodation will enhance the tourism potential of the area.

BHIMBANDH WILDLIFE SANCTURAY, BIHAR

1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Management Plan (2015-16 to 2024-25)	Area was severely affected by left wing extremist activity (LWEA) over past one decade. Systematic identification of values have been carried out. The approved management plan is in place and the sanctuary management has started its activities in the park.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified and assessed and monitored.	Good	✓		
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historico-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Management Plan (2015-16 to 2024-25)	Presence of 29 villages inside the PA and 434 villages up to 3Km from the PA exert tremendous pressure in terms of grazing, fuel wood and NTFP
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓	Discussions with the DFO, Munger during the field visit	

				<p>collection. The area is also prone to left wing extremist activity.</p> <p>Though the area has potential to support good animal density, our observations indicate low animal use of the area.</p>
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* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor	✓	Management Plan (2015-16 to 2024-25) MEE team field notes	Presence of 29 villages inside the PA and 434 villages up to 3Km from the PA exert tremendous pressure in terms of heavy exploitation of timber, illegal mining, grazing, fuel wood and NTFP collection. The area is also prone to left wing extremist activity.
The site has some human and biotic interference.	Fair			
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category+	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor		Management Plan (2015-16 to 2024-25).	The sanctuary has been properly identified, spanning over an area of 680.94 sq. km. that exists in the form of one compact contiguous block. The sanctuary has been categorized in to four distinct zones; core, buffer, ecotourism and eco-sensitive. The eco-sensitive zone around the sanctuary is 0.2 – 2 km wide from its periphery, includes 291 villages and covers an area of 443.11 sq. km.
Site identified correctly but not categorized.	Fair			
Site identified correctly but not systematically categorized.	Good			
Site identified correctly and systematically categorized with proper zonation plans.	Very good	✓		

*Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category+	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor		Management Plan (2015-16 to 2024-25).	An approved and updated management plan of the area is available.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good	✓		

*Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor		Management Plan (2015-16 to 2024-25).	The first management plan of the area was prepared for the period 1992-2002. However, the plan could not be implemented as it remained unapproved. A recent management plan is in place for the period 2015-16 to 2024-25.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good	✓		
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the management plan elaborate on safeguarding the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not safeguard the threatened biodiversity values.	Poor		Management Plan and field inspection.	Management plan elaborates on protection of threatened biodiversity values through appropriate theme plans.
The plan safeguards a few threatened biodiversity values.	Fair			
The plan safeguards a large number of threatened biodiversity values.	Good			
The plan safeguards all threatened biodiversity values.	Very good	✓		

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.5 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussions with DFO, Munger and field visits to peripheral villages and discussion with local communities.	The park management is carrying out remarkable water conservation activities with community support in the buffer zone of the park. The water conservation
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

				activities have started showing results in terms of increased water table and improved agriculture during the dry season.
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* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor		Management Plan, Observations during the field visit	Theme plans for restoration of habitat includes restoration of meadows, weed eradication and soil and water/moisture improvement.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair			
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good	✓		

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor		Management Plan.	Theme plans for fire protection and protection from grazing of domestic cattle have been elaborated in the Management Plan. Limited staff strength is a major drawback in implementing the protection
Site has an adhoc protection strategy.	Fair		Discussions with DFO, Munger.	
Site has a comprehensive protection strategy but is not very effective.	Good	✓		
Site has a comprehensive and very effective protection strategy.	Very good			

				strategy. Continued LWEA is also a cause of concern for park management.
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* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Does the management plan integrate the site into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not integrate the site into a wider network/ landscape.	Poor		Management Plan	Bhimbandh WLS is located in the Kharagpur Hills, south of river Ganga and west of river Kiul. The sanctuary is surrounded on all sides by dense human population. The geographical isolation of the sanctuary does not allow the plan to integrate the area with a larger landscape.
The plan makes some limited attempts to integrate the site into a network/ landscape.	Fair	✓		
The plan integrates the site generally quite well into a network/ landscape.	Good			
The plan fully integrates the site into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor		Information on staff position as provided by DFO, Munger.	The process has been initiated to fill up the vacant posts.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good	✓		
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts *vis- a- vis* existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor			The park is terribly short of staff and the existing staff lack adequate training for effective PA management.
Few trained officers and frontline staff, who are posted in the site.	Fair	✓		
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			Apart from training, field staff need to be sent on exposure visits related to habitat management, HWC management, use of technology.

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

3.3 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequate resources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor		Discussions with DFO, Munger.	More than a decade of LWEA has resulted in a severe setback for the sanctuary. Though the sanctuary had a very well managed establishment, most of the buildings have suffered severe damage during the insurgency period.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			During our visit, we came across several buildings under the process of restoration. It is expected that the restoration of infrastructure will be completed soon.

				However, LWEA continues to be a threat to the resources of the park.
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* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.4 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussions with DFO, Munger.	WL Management in the State is more dependent on State plans and CAMPA funds as the central sector schemes from MoEF&CC meets only a limited part of the need.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.5 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor	✓		No NGO is contributing resources to the PA at present.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

*Details of contributions (cash/kind) made by the NGOs in the last 3 years may be collected.

3.6 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor		Discussion with DFO, Munger.	More than financial resources, the site needs human resources for effective management.
Resources sufficient for some tasks.	Fair	✓		
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor		Discussion with CWLW and DFO, Munger.	There is scope to have incentive based mechanism for PAs.
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair	✓		
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.2 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor		EDC register, interaction with locals during the field visit, observations on soil moisture conservation program.	The participation of locals in improving soil moisture regime of area adjoining the buffer zone is commendable. The sanctuary management is doing some exemplary work in this regard with active support of local communities.
Opportunistic public participation in some aspects of PA management.	Fair			
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good	✓		

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.3 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor		Discussion with DFO, Munger	Office is in place for Public Information Officer. All queries have been addressed.
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.4 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor		EDC register, discussion with local communities during field visit	With the formation of EDCs, initiatives are being strengthened. Despite LWEA, the sanctuary management is making an effort to address the livelihood issues of resource dependent communities.
Few livelihood issues are addressed by PA management.	Fair	✓		
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor		www.forest.bih.nic.in	Though general information on Bhimbandh WLS is available in the official website of Bihar Forest Department, there is a need to develop
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			

Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			independent website for Bnimbandh WLS.
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* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Observations during the field visit.	Tourist facilities are meagre and no interpretation centre exists. Although, signages are placed on the road passing through the sanctuary and brochures on the area are available, attempt should be made to scale up the interpretation facility and establish visitor facilities.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Management Plan and discussion with DFO, Munger	No systematic research has been carried out in the recent past owing to the LWEA in the area. No trend of wildlife population is available.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Management Plan	Maintenance schedule exists in management plan, funds are periodically provided.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor		Management Plan	Authentic estimation for most species are not available for comparison.
Some threatened/ endangered species populations increasing, most others stable.	Fair	✓		
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor		Management Plan and observations during the field visit.	Left wing extremism that was a major threat to the area has been minimized. Active presence of paramilitary forces are an additional help to the sanctuary management.
Some threats to the Site have abated, others continue their presence	Fair			
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor		Management Plan	Compensation are being readily paid.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good			
Site has been able effective in mitigating all human-wildlife conflicts.	Very good	✓		

* Details of compensation paid for human injury/ death and property damage in the last 3 years may be collected.

6.4 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Discussion with officials and field observation.	The number of visitors to the area is low. Only day visitors are allowed.
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.5 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		EDC register	The area has been affected by LWEA and is slowly reverting back to normalcy. EDCs are in place and activities are being carried out in active participation of EDC members.
Some are supportive.	Fair			
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good	✓		

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	20	69.2%
2.	Planning	08	10	80	70	
3.	Inputs	06	10	60	32.5	
4.	Process	04	10	40	30	
5.	Outputs	04	10	40	17.5	
6.	Outcomes	05	10	50	37.5	
Total		30		300	207.5	

9. NAGI DAM BIRD SANCTUARY, JAMUI, BIHAR

Management Strengths

1. Nagi Dam was initially conceived as an irrigation project. Owing to its rich assemblage of migratory and resident waterfowl, it has been declared a wildlife sanctuary. Nagi Dam is located within a entirely human-dominated landscape and irrigates a considerable extent of agricultural fields, thus playing a key ecological function in the area. Besides agriculture, the local communities are dependent on the dam for fishing and for grazing their livestock. The rich assemblage of waterfowl in this dam provides an excellent eco-tourism opportunity. If planned properly, bird tourism at Nagi Dam can provide the local communities excellent livelihood opportunities.

Management Weaknesses

1. Lack of effective management and systematic monitoring of the bird population appears to be major weaknesses of this area. Despite being easily accessible, the place has not received much attention, and its potential has not been utilized. Lack of information and infrastructure has kept visitors away from this place. The sanctuary is grossly understaffed and does not have an approved Management Plan.

Immediate Actionable Points

1. Preparation of a Management Plan for the area should be the top priority. Further actions can be taken on the basis of the plan.
2. The staff strength available to manage the sanctuary is grossly inadequate. The Government of Bihar needs to recruit young staff members and place them in their respective positions so as to make the protection strategy effective.
3. Nagi Dam provides an ideal opportunity for bird watching tourism. Local youths should be trained in bird watching and should be encouraged to accompany tourists as guides. Instead of government-controlled tourism, the emphasis should be on community-based tourism. The local communities should be involved to manage the tourism in the area.
4. Systematic monitoring of the bird population should be initiated with the help of local birdwatchers, NGOs and universities in order to understand its trend.
5. The significance of Nagi Dam as an important bird habitat needs to be highlighted through scientific studies and advertisements in the print and visual media.

9. NAGI DAM BIRD SANCTUARY, JAMUI, BIHAR

MEE Year (2017-18)

1. Context

1.1 Are the values of the site well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed or monitored.	Poor		Discussion with DFO, Jamui	Nagi Dam was completed in 1958 with the primary purpose of water storage for irrigation. Subsequently, in 1997, the area was declared a wildlife sanctuary. The dam supports a good congregation of migratory waterfowl in winter and is well known for its barheaded geese congregations.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified and assessed and monitored.	Good			
All values systematically identified and assessed and monitored.	Very good			

*Values would also include geo-morphological, historico-cultural and faunal and floral species.

1.2 Are the threats to site values well documented and assessed?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Discussions with the DFO, Jamui during the field visit	Spread over an area of 1.915 sq km, the sanctuary is surrounded by villages and agriculture fields. There are no major threats to the migratory birds in this area in terms of poaching.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* This assessment should be based on number, nature and extent of threats. Threats within and outside PA should both be considered. Impacts, if any on the population abundance of key species may be indicated in the remarks.

1.3 Is the site free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The site has extensive human and biotic interference.	Poor		Discussion with DFO Jamui and observations during the field visit.	The site is subjected to fishing and grazing. During the dry season, when water recedes, part of the wetland is used for agriculture. No major extraction in terms of sand or boulder mining takes place in this area.
The site has some human and biotic interference.	Fair	✓		
The site has little human and biotic interference.	Good			
The site has no human and biotic interference.	Very good			

*This assessment should be based on existence of human settlements/ villages; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. Number and size of human settlements/ enclaved villages and their impacts on the site may be indicated in the Remarks.

2. Planning

2.1 Is the site properly identified (NP/WLS) and categorized (in terms of zonation) to achieve the objectives?

Assessment criteria*				
Condition	Category+	(Tick ✓)	Reference document(s)	Remarks
Site not identified correctly or categorized.	Poor		Gazette notification of eco-sensitive zone of Nagi Dam Bird Sanctuary (No. 1579, dated 24 June 2016).	The sanctuary has been properly identified, spanning over an area of 1.915 sq. km. The eco-sensitive zone around the sanctuary is 500m wide from its periphery, includes four villages and covers an area of 21.4 sq. km.
Site identified correctly but not categorized.	Fair			
Site identified correctly but not systematically categorized.	Good	✓		
Site identified correctly and systematically categorized with proper zonation plans.	Very good			

*Management prescriptions for various zones (Core, Buffer, Tourism etc) may be carefully assessed.

2.2 Does the site have a comprehensive Management Plan?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No relevant Management Plan in place.	Poor	✓	Draft management plan	The site does not have an approved management plan.
Management Plan exist but not comprehensive.	Fair			
Site has a comprehensive Management Plan.	Good			
Site has a comprehensive, science based Management Plan prepared through a participatory process.	Very good			

*Is the Management Plan consistent with WII Guidelines or not? The extent to which the concerns of the stakeholders, if any have been incorporated in the Management Plan may be commented upon.

2.3 Is the Management Plan routinely and systematically updated?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No process in place for systematic review and update of Management Plan.	Poor	✓	Discussion with DFO, Jamui	No previous management plan exists for the site and only a draft management plan was made available during the visit that is not comprehensive in nature and is yet to be submitted for approval.
Management Plan sometimes updated in adhoc manner.	Fair			
Management Plan routinely and systematically updated.	Good			
Management Plan routinely, systematically and scientifically updated through a participatory process.	Very good			

2.4 Does the management plan elaborate on safeguarding the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not safeguard the threatened biodiversity values.	Poor	✓	Discussion with DFO, Jamui and draft management plan	No approved management plan is available for the site.
The plan safeguards a few threatened biodiversity values.	Fair			
The plan safeguards a large number of threatened biodiversity values.	Good			
The plan safeguards all threatened biodiversity values.	Very good			

* Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.5 Are stakeholders given an opportunity to participate in planning?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Discussions with DFO, Jamui.	Not much of systematic dialogue takes place between the sanctuary management and stakeholders in planning activities for the area.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* The result of participation must show in the field and not merely reported as a routine exercise. Further, is there a system/scope of putting the draft Management Plan in Public Domain in place?

2.6 Are habitat restoration programmes systematically planned and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat restoration programmes are entirely adhoc.	Poor		Observations during the field visit	Plantation activities along the bank was noticed during the field visit.
Limited planning and monitoring programmes are in place for habitat restoration.	Fair	✓		
Habitat restoration programmes are generally well planned and monitored.	Good			
Habitat restoration programmes are thoroughly planned and monitored.	Very good			

* This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? What is the extent of 'invasive species in the Site? Are there any measures to reduce/ remove them? Have these been successful?

2.7 Does the site has an effective protection strategy?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Site has no protection strategy.	Poor	✓	Discussions with DFO, Jamui.	A small anti poaching camp of forest department at the site was under construction during the visit. The protection strategy needs to be strengthened.
Site has an adhoc protection strategy.	Fair			
Site has a comprehensive protection strategy but is not very effective.	Good			
Site has a comprehensive and very effective protection strategy.	Very good			

* This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. Is there any coordination with other wings of the Forest Department/ Police/ Customs etc? Are these effective?

2.8 Does the management plan integrate the site into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The plan does not integrate the site into a wider network/ landscape.	Poor	✓	Discussion with DFO, Jamui	No approved management plan exists for the area.
The plan makes some limited attempts to integrate the site into a network/ landscape.	Fair			
The plan integrates the site generally quite well into a network/ landscape.	Good			
The plan fully integrates the site into a wider network/ landscape.	Very good			

* Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? What kind of relationship exists with the District Administration and other Line Departments? Does the Site get any funds from these agencies?

3. Inputs

3.1 Are personnel adequate, well organised and deployed with access to adequate resources in the site?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, personnel explicitly allocated for PA management.	Poor	✓	Information on staff position as provided by DFO, Jamui.	The staff strength to protect the area is grossly inadequate. Adequate resources are not available to protect the area.
Some personnel explicitly allocated for PA management but not systematically linked to management objectives.	Fair			
Some personnel explicitly allocated towards achievement of specific management objectives.	Good			
Adequate personnel explicitly allocated towards achievement of specific management objectives.	Very good			

* This assessment should *inter-alia* be based on number of personnel allocated for attainment of PA objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts *vis- a- vis* existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Does the site have trained manpower resources for effective PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Very few trained officers and frontline staff in the site.	Poor	✓	Discussion with DFO, Jamui	The sanctuary suffers from acute shortage of manpower. Only the DFO, Jamui who supervises a much large area is wildlife trained. However, no other staff in the division are trained for effective PA management.
Few trained officers and frontline staff, who are posted in the site.	Fair			
A large number of trained officers and frontline staff are posted in the site.	Good			
All trained managers and frontline staff posted in the site.	Very good			

* Indicate % of trained staff in various categories. i.e. Higher Management: ACF/ DCF/ CF/ CCF; Frontline Staff: Range Officer; Beat Officer; Forest Guard; Casual Daily Labour (CDL); Others.

3.3 Are resources (vehicle, equipment, building etc.) adequate, well organised and managed with access to adequateresources?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for PA management.	Poor		Discussions with DFO, Jamui and observations during field visit.	Infrastructure in terms of buildings and watch towers were under construction. A patrolling vessel is also available to patrol in the water body.
Some resources explicitly allocated for PA management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.4 Are resources (human and financial) linked to priority actions and are funds released timely?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussions with DFO, Jamui.	In the absence of an approved management plan, the funds are being allocated to the site as per the Annual Plan of Operation.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by MoEF and their utilization by site in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.5 What level of resources is provided by NGOs?

Assessment criteria*				
Condition*	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the site.	Poor	✓	Discussions with DFO, Jamui	No NGO is contributing resources to the PA at present.
NGOs make some contribution to management of the site but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some site level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many site level activities.	Very good			

*Details of contributions (cash/kind) made by the NGOs in the last 3 years may be collected.

3.6 Does PA manager considers resources (human and financial) to be sufficient?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resources insufficient for most tasks.	Poor	✓	Discussion with DFO, Jamui.	More than financial resources, absence of human resources is affecting effective management of the area.
Resources sufficient for some tasks.	Fair			
Resources sufficient for most tasks.	Good			
Resources are in excess for most tasks.	Very good			

4. Process

4.1 Is PA staff performance management linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff performance management and management objectives.	Poor	✓	Discussion with DFO, Jamui.	The site needs to develop a good management plan that needs to define the management objectives very clearly following which staff performance can be linked to achievement of management objectives.
Some linkage between staff performance management and management objectives, but not consistently or systematically assessed.	Fair			
Performance management for most staff is directly linked to achievement of relevant management objectives.	Good			
Performance management of all staff is directly linked to achievement of relevant management objectives.	Very good			

*Has the PA staff received award/ appreciation from any agency in the last 3 years?

4.2 Is there effective public participation in PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in PA management.	Poor		Discussion with DFO, Jamui and interaction with local villagers.	The dam irrigates about 9,850 acres of land. Besides locals are dependent on the dam for fishing, grazing and agriculture. Dependency of locals on the dam provides an excellent opportunity to engage with park management.
Opportunistic public participation in some aspects of PA management.	Fair	✓		
Systematic public participation in most aspects of PA management.	Good			
Comprehensive and systematic public participation in all important aspects of PA management.	Very good			

* Participation would include Conservation & awareness programmes, Census operations, Intelligence gathering, Forest fire control etc.

4.3 Is there a responsive system for handling complaints and comments about PA management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic approach to handling complaints.	Poor		Discussion with DFO, Jamui	Office is in place for Public Information Officer. All
Complaints handling system operational but not responsive to individual issues and limited follow up provided.	Fair			

Coordinated system logs and responds effectively to most complaints.	Good	✓		queries have been addressed.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Number of queries made and response thereof under the Right to Information (RTI), Act in the last 3 years may be compiled.

4.4 Does PA management addresses the livelihood issues of resource dependent communities especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by PA management.	Poor	✓		No systematic mechanism is in place.
Few livelihood issues are addressed by PA management.	Fair			
Substantial livelihood issues are addressed by PA management.	Good			
Livelihood issues of resource dependent communities especially women are addressed effectively by PA managers.	Very good			

5. Output

5.1 Is adequate information on PA management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on PA management publicly available.	Poor		www.forest.bih.nic.in	Though general information on Nagi Dam Bird Sanctuary is available in the official website of Bihar Forest Department, there is a need to develop independent website for Nagi Dam.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues for most PAs or groups of PAs.	Good			
Comprehensive reports are routinely provided on management and condition of public assets in all PAs or groups of PAs.	Very good			

* Does the Site has a website? If yes, is it comprehensive, well-managed and periodically updated?

5.2 Are visitor services (tourism and interpretation) and facilities appropriate for the relevant protected area category?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities are at odds with relevant PA category and/or threaten PA values.	Poor	✓	Observations during the field visit.	No tourist facilities in terms of accommodation or interpretation centre is available.
Visitor services and facilities generally accord with relevant PA category and don't threaten PA values.	Fair			
All visitor services and facilities accord with relevant PA category and most enhance PA values.	Good			
All visitor services and facilities accord with relevant PA category and enhance PA values.	Very good			

* Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, site related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by site), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience. Details of numbers of visitors/ tourists(both domestic and overseas) coming in the last 3 years and the revenue earned may be compiled.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Discussion with DFO, Jamui	Although, Nagi Dam supports good congregation of migratory water fowls, no systematic research has been carried out in the area.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of management related trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

* Not all site attract projects and researchers and with exceptions, little research takes place on the site own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Details of number of research projects in the last 3 years, institutions involved, salient outcomes may be collected and used in awarding scores.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussions with DFO, Jamui	Funds are provided as per the Annual Plan of Operation.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequately made available.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species especially key faunal species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species populations declining.	Poor		Discussion with DFO, Jamui	Nagi dam is well known for its Barheaded geese congregations. However, no population trend was made available to us during our visit.
Some threatened/ endangered species populations increasing, most others stable.	Fair	✓		
Most threatened/ endangered species populations increasing, most others stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks. Comments on the population trends may be made under Remarks.

6.2 Have the threats to the site being reduced/ minimized or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the Site have not abated but have enhanced.	Poor		Discussions with DFO, Jamui and observations during the field visit.	The local people are extremely supportive to park management. Hunting or poaching of water birds is minimal in this area.
Some threats to the Site have abated, others continue their presence	Fair			
Most threats to the Site have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the Site have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.3 Has the site been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are rampant.	Poor		Discussion with DFO, Jamui	No major issue pertaining to human wildlife conflict exists in this area.
Site has been able to mitigate few human-wildlife conflicts.	Fair			
Site has been able to mitigate many human-wildlife conflicts.	Good	✓		
Site has been able effective in mitigating all human-wildlife conflicts.	Very good			

* Details of compensation paid for human injury/ death and property damage in the last 3 years may be collected.

6.4 Are the expectations of visitors generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor	✓		The area barely receives any visitors.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Good expectations of most visitors are met.	Very good			

* Is there any system of receiving/ analyzing visitor feedback?

6.5 Are local communities supportive of PA management?

Assessment criteria*				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with local communities	The local communities are extremely supportive of PA management.
Some are supportive.	Fair			
Most locals are supportive of PA management.	Good			
All local communities supportive of PA management.	Very good	✓		

* There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the dis-affectation simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Questions (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall Score
1.	Context	03	10	30	15	42.5%
2.	Planning	08	10	80	27.5	
3.	Inputs	06	10	60	20	
4.	Process	04	10	40	17.5	
5.	Outputs	04	10	40	15	
6.	Outcomes	05	10	50	32.5	
Total		30		300	127.5	