

Flood Update VII from *Water Initiatives Odisha*



19th September 2011

Dear Friends/Co-sailors,

Between our Sixth Update that we sent on 14th September and this Seventh one, even as flood relief work continues and fresh floods have hit the Baitarani River, the debate on Flood Management has caught up various sections of the state. It's heartening to note that the key issues that we raised in our First Update are making rounds in several debates, media articles and in other platforms. In fact, WIO too has already participated in several such debates and has been constantly re-emphasising on its points with regard to need of revisiting 'Rule Curve' of Hirakud dam, co-ordination with Chhatisgarh and IMD for an integrated basin planning and management; and the very fact that large dams are no success in managing floods. Rather they cause more devastation and hence we need a lot of other time tested interventions to have a proper Disaster Management System in place. Our urge to the state government to revisit the "Model Flood Plain Zoning Bill" has also hit the policy corners and other sections of the state. This we realise from the growing debate on this and the Chief Minister's intervention to free encroachments from flood plains. We welcome these efforts by the state government. However, we once again urge upon it to look into the matter in a more integrated approach and cover the entire basin and not just one city. We need to re-learn living with floods rather than forcing rivers to live by our rules!

As we write this Update in the morning hours, information available from sources reporting state government figures say that the **current floods of the state has affected 4318 villages in 19 districts. 38 people have died so far; at least 16 people are missing, and near to 3.1 million people have been affected by this Mega Flood of 2011.** The Chief Minister of the state has ordered extension of Relief Services by another 7 days and the District Collectors have been asked to submit the flood damage report by 20th instead of the earlier fixed date of 25th. This is because a Committee from the Central Govt. may visit the state any day after 20th. Preliminary assessment by state govt. sources put the damage of houses at 71,297 and crop damage over 2.87 lakh hectares. The state government has urged upon the Centre to provide seeds at concessional rate for the rabi crop as farmers lost stored seeds. Meanwhile, as newspapers report, 33,000 affected people in Kendrapara, Jajpur, Subarnapur and Jharsuguda districts were being given food in 120 relief camps. Over 1,200 boats were deployed for rescue and relief operations, while 2.8 lakh people were evacuated from low-lying areas. The OSDMA website has an update of flood damage and relief work till 16th September, which can be assessed at http://www.osdma.org/Download/Flood_2011Update.pdf

As already informed, we are deliberately keeping the format of this update very simple and user friendly. In this update we have the following sections. The **LEAD** section refreshes the debate over Dams and Flood control with an article by Prof. Arttabandhu Mishra, Chairperson, Water Initiatives Odisha. Then we introduce an **EXPERTSPEAK** section where we include an article by Biraja Kabi Satapathy, a Water and Sanitation Expert, who deals with Environmental Health issues during and post flood situations. We also have the regular **NEWS** sections where we hand pick news from various newspapers for you to get an overview of the flood situation in the state, relief and rehabilitation measures under way and also politics

around those. We then provide you with small important statistics in our **STATS** section that are useful in assessing the current situation of reservoirs, rainfall, etc. Finally, in the **MET SPEAKS** section, we highlight some of the key weather forecasts that may affect the flood conditions and relief-rehabilitation operations.

Once again, we would like to inform you that, at the moment, it's occasional and we may come up with these updates as and when we can, given our limited manpower and resources. However, with your inputs and support, we are sure; we shall be able to ensure regular flow of this update.

We request you to send in your reports of activities, your views; and any other interesting and relevant article, books, photographs, and anything that you feel we should cover in this Update. It's YOU who is the most important FUEL of this effort.

Look forward to listen from you and your continued support.

Thanks and regards,

Ranjan Panda

Convenor, Water Initiatives Odisha

STOP PRESS: *At 9.00 hours on 19.09.2011, Reservoir Level of Hirakud was 629.25 and 11 Sluice Gates were open. 1,89,955 cusecs was inflow and 2,02,664 cusecs was the outflow. From 17th Sept morning to 18th Sept morning, the average rainfall at Hirakud upstreams was 16.10 mm, and at downstreams it was 13.88 mm.*

LEAD

Simple ways to tackle flood menace

Arttabandhu Mishra

Flood before the dammed rivers and after that have different explanations. Before the dams were built, floods were natural calamities but after the dams they have become manmade (politicians, engineers and contractors) disasters. Flood creators have political and economic gains. This year (2011) is a preparatory year for panchayat elections in Odisha. The grassroots level political workers survive on *sarkari thika* (government sponsored contractual work) for which flood creates a wonderful avenue. So, the flood impacts, which could have well been minimized with proper management of Hirakud reservoir, were let loose to create more havoc.

Research establishes increased flood impacts after the construction of dams, barrages, canals, flood control embankments, roads and railway lines. This means structures which obstruct free flow of runoff towards the sea. Ancient and medieval civilisations understood the link of water from mountains to seas through rivers and promoted communities based traditional water harvesting structures for massive runoff storage and utilisation during non-monsoon months. Modern (civilized?) human banners, implementers used good earth to convert these storage structures (ecologically lentic aquatic ecosystems) to sites for roads, rail links, parks, buildings, etc. and invited runoff water into their houses as honoured guest by plugging the road side drains as disposal sites for domestic waste, both decomposable and non-decomposable.

Time we think about solutions of obstructing the runoff of excessive rain water to the rivers and also conserve some for our drought times. Climate change has made rainfall erratic and cloud burst created

flood a regular affair. WE need to take concrete measures to tackle this at village level. I give you an example.

Let us imagine that we live in a village which has an area of 200 acres and we get an annual rainfall of 1500 mm (5 feet) thus producing 1000 acre feet of water of which 20% (200 acre) would be drunk by the ground and the same amount by the Sun. So we have 600 acre feet which flow out. Let us allow 200 acre feet towards the river for the environmental flow for the riverine good health and plan to harvest 400 acre feet of water in the village lands, on locations selected by wise villagers or persons who can study the topographic maps. We can use 10-20 acres of the village land at different locations and store all the runoff for our utilisation and create a solution for both drought and flood. This can be done even without government help by the local youth donating labour or if they want the govt. can organise political pressure. The 200 acre village can plan its land use for habitation, agricultural land, water storage, forest, grazing, etc. This is not theory. We can visit Anna Hazare's village and many other areas to see this.

I am urging upon the youth of the state to come forward and work towards these solutions. We need to live with disasters and keep trying to reduce their impacts.

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EXPERTSPEAK

Combating diseases in flood situations

Biraja Kabi Satapathy

Unprepared and catastrophic flood often results in the displacement of people who may find themselves in overcrowded temporary settlement. There is always a fear of outbreaks of diseases in the aftermath of flood. Environmental health problems can quickly arise in these situations. One of the most important tasks is to improve the standards of environmental health. This involves provisioning of improved sanitation, adequate and safe water supplies, and a decent shelter. Common problems found among flood displaced population are diarrhoea, pneumonia and other respiratory infections, malaria, tuberculosis, measles, eye and skin infections, etc. Outbreak of cholera in settlement poses a serious threat and the poor disposal of rubbish also creates breeding sites for mosquitoes and attracts rodents that may harbour disease transmitting fleas.

Root causes of the diseases

Diseases caused by poor environmental conditions are frequently related to faecal oral route of contamination. **Faecal oral diseases** like diarrhoeas caused by drinking contaminated water, poor personal hygiene like lack of hand washing at critical times and by poor food hygiene that is contamination of food by flies. These diseases can be virulent in overcrowded, unsanitary conditions and frequently the major cause of illness during flood. Excreta are the major source of diseases unless there is a barrier to the faecal oral route. **Shelter related diseases** such as pneumonia, where people become more susceptible to infection due to cold and wet. **Disease caused by insect and rodent vectors**, such as malaria, the presence of water gives scope to the disease vectors, the mosquito to breed. Flooding may initially flush out mosquito breeding, but it comes back when the waters recede. The lag time is usually around 6-8 weeks before the onset of a malaria epidemic.

The only epidemic-prone infection which can be transmitted directly from contaminated water is leptospirosis, a zoonotic bacterial disease. Symptoms can take 2 - 26 days , average 10 days to develop, and may include, dry cough, fever, headache, muscle pain, nausea, vomiting, and diarrhoea and shaking chills. Transmission occurs through contact of the skin and mucous membranes with water, damp soil or vegetation, such as sugarcane or mud contaminated with rodent urine. The occurrence of flooding after heavy rainfall facilitates the spread of the organism due to the proliferation of rodents which shed large amounts of leptospores in their urine.

While people's susceptibility to infection varies; it is likely to be greater among children, old, malnourished, and in people who are already weak. Malnourished children are usually in high risk.

What can we do?

Environmental control aims to prevent infection by interrupting the routes of diseases transmission. The number of possible routes of infection means that a range of measures is necessary to interrupt transmission. Timely, adequate, safe drinking water supply to settlement site and people affected by flood is very crucial. At the same time the user must handle the water properly after collection to prevent contamination before it is consumed. Hand washing with soap and water in critical times i.e. after defecation, before taking food, and while handling foods are equally important is controlling contamination. Provisioning good sanitation facilities must be complimented by health promotion and education, that people take the required measures in personal hygiene. Experience says access to water and sanitation facilities without proper hygiene education does not work. Likewise hygiene promotion is not just providing information rather it should include the provision of appropriate materials, facility that help people in adopting good hygiene practices. For example it is no use of promoting hand washing with soap and water at critical times if there is no provision of soap. An improvement in water and sanitation often reduces the occurrence of diseases. Vaccination complements environmental controls and gives additional protection by improving a person's ability to withstand diseases once infected.

We all have our shares to contribute

Numbers of stakeholders are responsible for ensuring interruption of transmission. Ensuring adequate and quality water supply to settlement site and people in the marooned villages need to be made by engineers of Rural Water Supply & Sanitation (RWS&S) in rural areas and Public Health Engineering Organisation (PHEO) in flood affected urban areas. Assuming all the surface water is polluted it's their responsibility to see the ground water from properly protected boreholes is bacteriologically safe. Vaccination, control of diarrhoeal disease, early diagnosis and treatment for malaria are some work need to be extended by health personnel. The implementation of both water and sanitation measures requires the acceptance and cooperation of users. Therefore it is important to involve community from the very beginning. Involvement of local leaders and volunteers is crucial in raising awareness, supervision, maintenance and management of sanitation facilities and regular monitoring of various environmental health measures. Civil society organisations, NGOs and media are expected to take the responsibility of health promotion by awareness generation.

Flood results in a serious disruption of society, involving widespread human suffering and physical loss or damages. All workers must understand the complexity of the situation and trauma of those floods affected. Stakeholders engaged in post flood activities need to be sensitive enough to handle the condition.

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NEWS

State to drain out urban flood

BIBHUTI BARIK

Bhubaneswar, Sept. 18: The state government has woken up to ensure better drainage system for the city to check urban flooding. It has asked the civic and development agencies to take steps to check encroachments blocking natural drainage channels and restrict illegal constructions in the flood-affected zones on city outskirts.

Official sources said chief minister Naveen Patnaik convened a meeting of the Bhubaneswar Development Authority, the Bhubaneswar Municipal Corporation, the water resources department and the public works department yesterday. Naveen took stock of the drainage situation and asked the authorities to take the renovation work of all the 10 water channels.

Earlier, drainage division, Cuttack of the water resources department had taken the renovation plan of four channels for which Rs 68 crore were earmarked by the Jawaharlal Nehru National Urban Renewal Mission. Earlier in February and July, Naveen also asked officials of the drainage division to expedite the renovation work in all channels.

Under the corporation area only 30 per cent roads have drains. Therefore, the civic authorities are receiving flak for waterlogging. The state government asked the corporation authorities to ensure more drains for the city roads, so that the storm water can be channelised properly. The public works department officials were also asked to ensure drainage along with all their roads.

“The corporation and the development authority were asked to have a joint-eviction squad to ensure free flow of water in the natural drainage channels. The squad will work in identifying the vulnerable points such as the NH-5 and Acharya Vihar meeting point where encroachment on drainage channel No. 4 has resulted in flood-like situations,” said a senior revenue official.

With 10 natural drainage flowing through the city, it is found that because of illegal encroachment, many drains are not getting adequate space for discharging storm water. Moreover, the Gangua nullah, the carrier of all output from the drainage channels, is also getting choked owing to siltation.

A senior corporation official admitted that though still 70 per cent of roads under the corporation lack drains, the existing ones are affected by dumping of solid wastes by the citizens. The practice is affecting the flow of storm water in the natural drainage channels. “There should be a serious awareness drive on educating public,” he said.

“As the Gangua nullah full with silt and natural drainage channels blocked by solid wastes and remaining unattended for years, the water discharge by the city drainage system is not becoming effective. While the width of the Gangua, in many places, vary from 40 to 120 feet as per the development authority’s master plan, it is reduced to 12 to 35 feet delaying the final discharge through the nullah and causing waterlogging in the drainage channels,” he said.

Housing and urban development secretary Sourabh Garg said: “The process has already started to equip the development authority with an effective demolition squad with high-end equipment to demolish the illegal structures coming up in the high-flood zones on the city outskirts.”

In a report Flout rules and float, The Telegraph first brought the issue of the multi-storeyed structures flouting the development authority’s building regulations as those had come up in the flood-affected zones along Sundarpada-Jatni Road.

“As the areas beyond Sundarpada are already included in the proposed enhanced development authority’s jurisdiction, it should swiftly act to include the notified areas,” said a real estate developer. The Centre has already formulated the national guidelines on management of urban flooding and it has focused on urban flooding de-linking it from riverine flood which affects extensive rural pockets.

It has sent the guidelines to the state government, so that the civic bodies can implement them as soon as possible.

“The corporation and the development authority should act quickly as urban flooding is different from rural flooding and at times the developed catchment owing to unplanned urbanisation can lead to very high run-off with flood peaks from 1.8 to 8 times of the regular rural flood,” said Piyush Ranjan Rout, an urban planning consultant.

Retired engineer-in-chief of the public works department Nandanandan Das said: “Safety of the residents should be priority of the civic administration and the issue such as encroachment should be dealt with iron hands.”

Source: http://www.telegraphindia.com/1110919/jsp/orissa/story_14523914.jsp

Orissa Government directs collectors to submit report on flood by September 20

Report by Pravuprasad Routray; Bhubaneswar: The State Government on Saturday asked Collectors of the flood-affected districts to submit the assessment reports by September 20. Chief Secretary Bijay Kumar Patnaik asked Collectors to submit reports by September 20.

State government rescheduled its assessment agenda as the Inter-Ministerial Group is scheduled to visit the State between September 20 and 28, the Government has decided to submit a preliminary report to the team during their stay, said Patnaik. The final memorandum would be submitted before the Central Government later, he said.

Earlier, the Chief Minister had asked Collectors of the flood-hit districts to complete assessment of the house damages by September 25 and ensure disbursement of house building assistance by October 5.

The Chief Secretary said through the preliminary report, the State Government would request the Union Government to provide adequate financial assistance to meet the loss in agriculture and allied sectors and to compensate for the house damages.

Source: <http://orissadiary.com/CurrentNews.asp?id=29219>

Orissa to seek 1 Lakh IAY houses from Centre

BHUBANESWAR: The State Government has decided to demand a lakh Indira Awas Yojana (IAY) houses from the Centre to compensate those whose houses were damaged or completely washed away in the floods.

A decision to this effect was taken at a high-level meeting presided over by Chief Minister Naveen Patnaik here on Saturday. Though the flood situation has improved with water level in the Mahanadi river system receding, the deluge has affected 20 lakh people in 19 districts.

According to preliminary estimates, more than one lakh houses had been damaged or completely washed away in the flood. The Government has decided to seek special assistance from the Centre keeping in view the distress conditions of the affected people.

Besides, the Government has also decided to request the Centre to provide 2,000 quintals of 'moong', another 2,000 quintals of 'biri', 1.5 lakh quintals of groundnut seeds, 700 quintals of mustard and 200 quintals of sunflower seeds to the farmers in the flood-affected district free of cost for the rabi crop.

Fresh flood in the Baitarani, which has affected Bhadrak and Jajpur districts, was discussed at the meeting. The Chief Minister directed the officials to vaccinate all the cattle and other animals in the affected areas. Besides, he asked the officials to provide 300 tonne cattle feed every day for the flood-hit areas.

Naveen said supply of food materials to the affected areas should be ensured. Besides, a close watch should also be kept on the public distribution system (PDS) and prices of essential commodities. Chief Secretary Bijay Kumar Patnaik and other senior officials were present.

Source: <http://ibnlive.in.com/news/orissa-to-seek-1-lakh-iay-houses-from-centre/185264-60-117.html>

Symbol row erupts on flood relief

MANOJ KAR

Kendrapara, Sept. 17: The Orissa government finds itself in the midst of an embarrassing controversy following allegations of official relief being distributed in bags emblazoned with conch, the election symbol of the ruling Biju Janata Dal (BJD).

Miffed at the ruling party's bid to make political capital out of the relief operation, flood-affected people in Nadiabarei village of Kendrapara district refused to accept dry food packets containing flattened rice (chudda) as they bore the conch symbol. Sensing the anger, the embarrassed officials distributing relief material took back the bags. Similar protests were also seen in Bandhakata, Ramachandrapur and Patalipanka villages.

The controversy gathered steam with former Kendrapara Zilla Parishad president Nagendra Behera alleging that the administration was brazenly allowing the ruling party to take credit for the relief operation. Behera also alleged that ruling party sarpanches were found hoarding relief material so that they could be distributed at a select group of villages.

Kendrapara collector Pradipta Kishore Pattnaik admitted to have received complaints about relief material being carried in bags bearing the symbol of a political party.

"It was an inadvertent mistake. The flattened rice packets that contained conch symbol have been withdrawn. The material is being dispatched to flood-affected areas again after repackaging," said Pattnaik, while claiming that the symbol also happened to be the trademark of the manufacturer.

The flood victims, however, are not ready to buy the collector's version. "We think all this is well planned with the panchayat polls fast approaching," said Sumanta Mohanty from flood-hit Parakula village.

"A partisan administration has turned the system into a flood of politics. Relief has become a means of wooing people towards parties," said Rasananda Parija, secretary of Patkura Surakhya Manch. The villagers are blaming the pliability of the administration for the ruling party's grip on the relief operation.

"It is surprising that no government employees are accompanying these relief teams. The relief, it seems, has been handed over to the politicians without any compunction," said Mohanty.

The ruling party men have managed to corner most of the relief material for its distribution in the villages supposed to be their strongholds.

"The BJD is running a parallel relief operation having taken over the government relief network," alleged Bijoy Mohapatra, former minister and senior BJP leader.

The district wing president of BJD, Krutibash Patra, however, dismissed the charge as 'frivolous' and 'politically-motivated'.

"Despite adverse conditions, the government machinery is doing its best. The BJD panchayati raj representatives are doing their duty in assisting the officials in ensuring hassle-free relief distribution. But this should not be construed as BJD running the show," said Patra.

However, a senior executive of a Paradip-based industrial unit, said: "When we spoke to senior government officials expressing our desire to visit a marooned area for distributing relief, we were asked to contact a powerful BJD leader of the district and distribute relief under his direction."

Pattnaik, on the other hand, asserted that the administration was committed to maintaining transparency in relief operations. "Our stand is non-partisan," he said.

Source: http://www.telegraphindia.com/1110918/jsp/orissa/story_14520386.jsp

Prime Minister concerned over floods in Orissa

Bhubaneswar: Prime Minister Manmohan Singh was concerned about the Orissa floods and a Central team will visit the affected areas shortly for assessment of damage caused by the deluge.

Union Minister of State for Agriculture Harish Rawat told reporters here that he was visiting flood-hit areas in the state on the instructions of the Prime Minister and would apprise him about the situation.

"We have sought detailed information on requirements of the state to deal with the situation," he said.

Helicopters were promptly provided to the state for air-dropping food and relief materials and Rs 154 crore was made available to Orissa under the Calamity Relief Fund in August, he said, rejecting allegations often levelled by the ruling BJD of Central negligence.

Orissa's Special Relief Commissioner PK Mohapatra met the Minister with chief secretary rpt chief secretary BK Patnaik.

Rawat said he sought information on loss in the agriculture sector and damage to houses in the floods so that help under Indira Awas Yojana could be provided.

Among the sectors hit by floods were rural development, works, water resources, panchayati raj, schools and anganwadis, Mohapatra said, adding that the situation arising out of fresh floods in river Baitarani was under control and relief was being provided in five districts.

The chief secretary has directed authorities to furnish damage assessment reports by September 20 in view of the visit by the Central team.

Source: http://zeenews.india.com/news/orissa/pm-concerned-over-floods-in-orissa_732043.html

Union Minister Rawat reviewed flood scenario in Orissa, says situation serious

Report by Rashmi r Parida; Bhubaneswar: Union Minister of State for Agriculture, Food Processing, Industries & Parliamentary Affairs Harish Rawat reviewed the flood scenario at State Guest House, Bhubaneswar and thereafter visited the flood affected areas of Puri District. After his visit he said to media flood situation in Orissa serious.

Flood waters receding further in the affected areas of the state. All major rivers are flowing below warning level except the Brahmani. A fresh spell of flood has come in River Baitarani due to heavy rain in its catchments during last 2 days.

4203 villages of 95 Blocks and 16 ULBs in 19 Districts namely Angul-2+1ULB, Balasore-2+1ULB, Bargarh-6, Bhadrak-4, Boudh-3+1ULB, Cuttack-14+3ULB, Deogarh-3+1ULB, Dhenkanal ± 6, Jajpur-9, Jagatsinghpur-7, Jharsuguda-1+1 ULB, Kendrapada-9+1ULB, Khurda±7+1ULB, Mayurbhanj-1+1ULB, Nayagarh-3, Nuapada-2+1ULB, Puri 8, Sambalpur-2+1ULB and Subarnapur-6+3 ULB have been affected by the current flood.

33 persons (Bhadrak±2, Dhenkanal-2, Jajpur-11, Kendrapada-10, Khurda-1, Mayurbhanj-3, Puri-2, Sambalpur-2) have lost their lives in the calamity. Besides, there is report of 12 persons swept away/ drowned in flood water in the districts of Bargarh-3, Nayagarh-3, Jagatsinghpur-1, Kendrapada-2 and Cuttack-3 but their dead bodies have not been found so far. As per reports received so far, live stock casualty including poultry stands at 372.

Report of damage of about 55,044 dwelling houses have been received from 13 Districts. Detailed report will be given by the Collector soon after the flood water is receded.

As per reports so far received from Collectors of 15 Districts (Angul, Balasore, Baragarh, Boudh, Cuttack, Jajpur, Jagatsinghpur, Jharsuguda, Kendrapada, Khurda, Mayurbhanj, Nayagarh, Puri, Sambalpur and Subarnapur), about 2.58 lakh people were evacuated from low lying areas to safer places and provided with emergent food assistance. 457 relief camps/ free kitchen centres were opened in the areas inundated and 220434 persons have been covered. Since the situation has improved, many of the people have returned to their home. As on date, 120 free kitchen centres are operating in 4 Districts namely Kendrapada, Jajpur, Subarnapur and Jharsuguda covering about 33,000 persons.

Dry food like Chuda, Gur, biscuit and Rice have been provided to the affected persons. 1212 boats have been deployed for rescue and relief operation.

Source: <http://orissadiary.com/CurrentNews.asp?id=29210>

Orissa faces fresh floods, toll 32

Bhubaneswar: A fresh spell of floods in river Baitarani inundated 12 gram panchayats in Bhadrak and Keonjhar districts of Orissa, as waters receded in the Mahanadi delta, with the death toll on Friday climbing to 32 besides 12 others missing, official sources said.

With situation improving in the Mahanadi delta and most villages are again accessible by road or waterways, the state government suspended air-dropping of food after five days.

"There is no need now to continue air dropping of food and relief materials as water has receded in most areas in the coastal region," Chief Secretary BK Patnaik said after Chief Minister Naveen Patnaik reviewed the flood situation.

Fresh flood threat, however, loomed in northern districts of Keonjhar, Bhadrak and Jajpur with rivers like Baitarani, Brahmanai and Budhabalang in spate following two days of heavy rain in the upper catchment areas in Jharkhand.

The collectors of the district were alerted and asked to take measures against fresh inundation, Revenue and Disaster Management minister SN Patro said.

Six boats were diverted to Bhadrak district from Jagatsinghpur where the floods receded recently, he said.

Rivers were flowing above the danger level at Akhuapada in Bhadrak district and Anandpur in Keonjhar district, the minister said. Sources in the special relief commissioner's (SRC) office said that 32 persons had so far died in the floods with the highest of 11 being reported from Jajpur district followed by 10 in Kendrapara district. Others died in Mayurbhanj, Dhenkanal, Sambalpur, Puri, Bhadrak and Khurda districts.

Twelve persons were reported to be swept away or drowned in the districts of Bargarh, Nayagarh, Jagatsinghpur, Kendrapara and Cuttack, Special Relief Commissioner PK Mohapatra said.

While most of the people returned from 457 relief camps, 200 were still operating in the worst-affected districts of Kendrapara, Puri, Jajpur, Subarnapur and Jharsuguda sheltering 76,000 people, the SRC said.

Dry food was provided to the affected persons while 1,110 boats were deployed in the rescue and relief operation. About 55,016 houses were damaged in 13 districts, with district collectors told to submit damage reports within September 25.

The floods hit a population of about 27 lakh in 19 districts.

Meanwhile, the state government said that an 11-member central team was likely to visit the state any time after September 20.

Source: http://zeenews.india.com/news/orissa/orissa-faces-fresh-floods-toll-32_731951.html

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STATS

Live Storage Filling of Major Reservoirs as on 18-Sep-2011

HIRAKUD	RENGALI	BALIMELA	MACHHKUN D	UPPER KOLAB	INDRAVATI	SALANDI
97.0%	101.5%	21.2%	95.5%	31.0%	31.9%	60.5%
Time:1200 hrs	Time:1200 hrs	Time:0800 hrs	Time:0800 hrs	Time:0800 hrs	Time:0800 hrs	Time:0600 hrs

Reservoir Level & position wrt. Full Reservoir Level

RL: 629.23ft	RL: 123.65m	RL: 1463.9ft	RL: 2747.8ft	RL: 850.17m	RL: 631.7m	RL: 75.33m
(-) 0.77ft	(+) 0.15m	(-) 52.10ft	(-) 2.20ft	(-) 7.83m	(-) 10.30m	(-) 6.97m

Reservoir Inflow & Outflow

I:157298Cusecs	I:2386.98Cumecs	I:267.18Cume cs	I:57.16Cume cs	I:121.3Cume cs	I:140.95Cume cs	I:46.52Cume cs
O:157298Cusecs	O:2251.82Cumecs	O:49.26Cume cs	O:85.41Cume cs	O:23.03Cume cs	O:45.69Cume cs	O:1.5Cume cs

Live Storage capacity & Live Storage available

Cap:482155 Ham	Cap:341371 Ham	Cap:267600 Ham	Cap:96993 Ham	Cap:93500 Ham	Cap:148550 Ham	Cap:55650 Ham
LS:467728 Ham	LS:346411 Ham	LS:56826.4 Ham	LS:92623.8 Ham	LS:28942 Ham	LS:47442.05 Ham	LS:33677 Ham

The **RED** line corresponds to **Full Reservoir Capacity**

Source: <http://www.dowrorissa.gov.in/Flood/ReservoirGraph.htm>

Met Speaks

19-Sep-2011 Morning Weather Bulletin

MAIN WEATHER OBSERVATIONS (Recorded during past 24 hours)

Monsoon Watch

◆ Monsoon would remain active over east and northeast India during next 2-3 days.

Main Weather Observations

◆ From 0830 to 1730 hours IST of yesterday, widespread rainfall has occurred over Sub-Himalayan West Bengal & Sikkim, Bihar and coastal Karnataka; fairly widespread over Assam & Meghalaya Gangetic West Bengal and Jharkhand; scattered over east Uttar Pradesh, Orissa and east Rajasthan and Isolated over rest of the country outside Punjab, Haryana, Tamilnadu, Uttarakhand and Jammu & Kashmir where weather remained mainly dry. The chief amounts of rainfall (2 cm and above) recorded at 0530 hours IST of yesterday were: Siliguri-10, Purnea, Jalpaiguri and Honavar-3 each and Varanasi, Gangtok, Majbat, Tadong, Bankura, Jagdalpur, Balurghat, Burdwan, Agumbe, Karwar and Mayabandar-2 each.

Synoptic features (based on 0530 hrs IST Observations)

- ◆ The low pressure area over Sub-Himalayan West Bengal and neighbourhood now lies over eastern parts of Bihar and neighbourhood with associated upper air cyclonic circulation extending upto midtropospheric levels tilting southwestwards with height.
- ◆ The axis of monsoon trough at mean sea level passes through Ferozpur, Ambala, Bareilly, Sultanpur, Patna, centre of low (Bhagalpur), Malda and thence southeastwards to east central Bay of Bengal.
- ◆ The offshore trough runs from Gujarat coast to Kerala coast.

Satellite Observations:

- ◆ Kalpana-1

cloud imagery at 0530 hours IST shows convective clouds over parts of Chhattisgarh, east India, west Assam & Meghalaya, northwest & central Bay of Bengal, Andaman sea and southeast Arabian Sea. Low/medium clouds are seen over remaining parts of the country outside plains of northwest India.

Major features of weather forecast (upto 0530 hours IST of 22-Sep-2011).

- ◆ Fairly widespread rain/thundershowers would occur over east India, northeastern states, Andaman & Nicobar Islands and along west coast.
- ◆ Scattered rain/thundershowers would occur over remaining part of the country outside northwest and southeast peninsular India where it would be isolated.

Warning

- ◆ Isolated heavy to very heavy rainfall would occur over Bihar and Sub-Himalayan West Bengal & Sikkim during next 24 hours.
- ◆ Isolated heavy rainfall would occur over Gangetic West Bengal, Jharkhand, Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura during next 48 hours.

Weather Outlook (upto 0530 hours IST of 24-Sep-2011)

- ◆ Fairly widespread rain/thundershowers would occur over east & adjoining central India and northeastern states.

Source: IMD

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Water Initiatives Odisha: *Fighting water woes, combating climate change...* more than two decades now!

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Please join our group 'Save Rivers Save Civilizations' at <http://www.facebook.com/groups/220598744649462>

Kiss the rain when you can, because water and abundance are falling apart...(Ranjan Panda)

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Water Initiatives Odisha (WIO) is a state level coalition of civil society organisations, farmers, academia, media and other concerned, which has been working on water, environment and climate change issues in the state for more than two decades now.