

List of Knowledge and information product Product to be Developed/ Developed under NHP as on 01-04-2021

A Major Products				
Sl no	Product Developed / to be developed	Agency	Brief Description	status
1	High resolution DEM (0.5 m accuracy) for an area 58460 Sq km	SOI	Will help in accurate flood forecasting and flood inundation mapping	Under progress
2	Creation of Geo data base and preparation of 3-5 m accuracy DEM	SOI	Will take the information from survey of India 1:25k toposheet and it will be clubbed with high resolution satellite imageries from NRSC. and prepare 3-5 m DEM	Under progress
3	Geoid model and connection to GTS BM of all hydro met stations	SOI	Developing Geoid model of various state to provide height to GW station. Connecting all Hydro met stations to GTS bench mark	Under progress
4	Real-time Operational Spatial Flood Early Warning System Development for Tapi and Godavari	NRSC	Web enabled FEW models for Godavari and Tapi basin 's major flood plains using space-based inputs and inundation maps using ALTM DTM and 10 m carto DEM.	Under progress
5	Development of Satellite-based Regional Evaporative Flux Monitoring System for India	NRSC	Development of evaporative flux observing and monitoring system at spatial scales of watersheds/river-basins and land use/land cover units and temporal scales of daily, fortnightly, monthly and annually.	Under progress
6	Glacial Lake Outburst Flood (GLOF) Risk Assessment For Indus , Ganga and Bramhaputra Basin of India	NRSC	GLOF risk assessment of glacial lakes in the Indian Himalayas, which includes inventory using high resolution satellite data, identification of critical lakes, GLOF modelling and assessment of risk. (Indus, Ganga and Brahmaputra)	Ppartly completed disseminated to stakeholders
7	Development of Spatial Snowmelt Runoff product in the Indian Himalayas	NRSC	Development of spatial snowmelt runoff product (daily/3-days) at higher temporal resolution for entire Indian Himalayas.	Under progress
8	Operational National Hydrological Modelling System for the entire Country	NRSC	Macro-scale, process based hydrological (Variable Infiltration Capacity - VIC) web enabled model has been adopted for modelling water balance components at uniform grid level. Model computes evapotranspiration, surface runoff, soil moisture, base flow and energy fluxes at the predefined grid resolution (few km to hundred km)	Under progress
9	Satellite data-based inputs for Irrigation Scheduling for a selected Irrigation Project command area (Narayan Pur)	NRSC	Operationalize utilization of satellite-based data integrated with hydro-meteorological and geo- spatial data sets for assessment of crop water needs of a selected Irrigation Project Command Area. The study aims at estimation of the spatial and temporal water requirements in an irrigated command area in near-real-time. (Narayanpur – Karnataka has been selected for the first phase)	Under progress
10	Operational hydrological drought services using remote sensing data	NRSC	It is planned to use remote sensing and model derived inputs for developing new indices for providing operational hydrological drought services for the country. A composite index will be developed which helps in the characterization of spatio-temporal variability of drought.	Under progress

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11	Web Enabled Hydrologic Modelling in SWAT (WEHMS)	NRSC	a web enabled interactive hydrological modeling system which facilitates online computation of hydrological fluxes at watershed scale, with a predetermined data base in SWAT which will have regional land cover, soil, topography, crop, meteorology and hydrological information available from the Indian datasets. The southern and eastern river basins of India namely Krishna, Godavari, Cauvery, Pennar, Narmada, Tapi, Mahanadi, Brahmani&Baitharni, Subarnarekha and West & East flowing river are included for this product	Under progress
12	Basin wise EHP model for medium- & long-term forecast (Cauvery, Narmada and Yamuna)	CWC	Prediction of water availability in terms of volume in a catchment at the time scale of days/weeks/seasons to come. Multi week forecasts will cover a period of up to 4 weeks from the date of issuing forecasts	Under progress
13	Physically based mathematical modelling for sediment rate estimation and sediment transport in the 7 river basins	CWC	Sediment generation modeling, Sediment transportation modeling, Sediment deposition modeling, River Morphological Studies, Development of Integrated Sediment Modelling - India Sediment Suite for Ramganga, Barak , Narmada, Cauvery & Three sub-basin of West flowing rivers in Western Ghats namely: Kuttidipuzha, Peechi, Mangalam	Under progress
14	Early Flood Warning System (EFWS) including inundation forecast in Ganga Basin	CWC	Inundation forecasting and its integration with WRIS/e-SWIS/WIMS with a customized GIS tool for the real time dissemination of water level forecasts, inundations forecast, and an inundation maps library. It also includes dashboard for the query-based generation of flood warning/flood inundation maps for all stakeholders.	Under progress
15	DSS for Integrated Reservoir Operations for Ganaga Basin	CWC	DSS for Integrated Operation of Reservoirs of Ganga Basin as a part of Crisis Management Plan (CMP) for flood management. Will help in better flood moderation and also Integrated near real time monitoring of network	Under progress
16	Development of DSS (PM) Tool	NIH	A decision support platform/ Tool maned DSS (PM) having web-based dashboard for display of results including display of water balance in a basin and inter-sectoral water allocation system for reservoirs.	Under progress. Model connector report submitted
17	Information System of Himalayan Springs for Vulnerability Assessment and Rejuvenation (ISHVAR, ईश्वर) and a spring data collection app in KoBo(NIH-21_2017_31)	NIH	Undertaken as a PDS for Vulnerability Assessment and Hydro-Geological Investigation of Selected Springs for Sustaining Local Water Demand in Ravi Catchment of Himachal Pradesh	partly completed disseminated to stakeholders
18	Studies on Occurrence, Distribution and Sustainability of Natural Springs for Rural Water Supply in Parts of Western Ghats, India (NIH-18_2017_28)	NIH	Undertaken as a PDS for Vulnerability Assessment and Hydro-Geological Investigation of Selected Springs for Sustaining Local Water Demand in Western ghat catchment	Study is about to complete
19	Web-based dynamic IT desktop and Android-based mobile application for performance evaluation of irrigation project (Location Sanjay Sagar of madhya pradesh)(NIH-1_2016_1)	NIH	The present work on development of Web application and Mobile App for performance evaluation of irrigation project is being carried out for Madhya Pradesh state Water Resources Department under the National Hydrology Project as PDS.	Under progress
20	Decision Support Tool and Mobile Application for Efficient Utilization	NIH	Under this PDS, a web and mobile-based application will be developed for irrigation projects for the management of irrigation releases and sharing of information between water resource managers, members of water user association, agriculture and soil scientists, NGOs, and farmers.	Under progress

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21	Mobile/web based application for WR managers and farmers for optimal release and management of water resources(NIH-28_2017_69)	NIH	a mobile/web-based application will be developed which helps in the management of irrigation releases and for optimal agriculture productions. It will also help in the scientific allocation of water resources and improved water management leading to enhanced water use efficiency.	Under progress
22	River Basin model for Integrated Reservoir Operation & Water Accounting of Narmada River Basin including Development of Nodal Centers & Interface software/ Networking	NCA	Development and and verification of historical natural flow of all location wherever there are available of data.Preparation and validate of River basin model including intregated Reservoir operation of 14 nos reservoirs .Preparation of dash board and enhance capacity of NCA	Under progress
B	Manuals and frame work Documents Developed under NHP			
1	Manual on hydro met	MoWR		completeddisseminated to stakeholders
2	Manual on rainfall data validation	MoWR		completeddisseminated to stakeholders
3	Resource book for Jaldoot	MoWR		completeddisseminated to stakeholders
4	Water level and discharge data validation manual is under final stages of internal review	DoWR		Under progress
5	Groundwater Quality Field Sampling Guide	DoWR		Under progress
6	Design and Construction of Monitoring Wells --	DoWR		Under progress
7	DWLR (and DWLQR): installation O&M. Inc. manual monitoring	DoWR		Under progress
8	Groundwater monitoring networks: Design and Evaluation	DoWR		Under progress
9	Processing High frequency groundwater monitoring data.	DoWR		Under progress
10	Springs: inventory and monitoring (including classification)	DoWR		Under progress
11	Groundwater Exploration and Investigation	DoWR		Under progress
12	Frame work document On spring	DoWR		completeddisseminated to stakeholders
13	Frame work document On IWRM	DoWR		Under progress
C	Flood forecasting / infow forecasting / DSS and other products under NHP			
1	Flood forecasting of Tripura Kaishshar and Agartala	Tripura		TOR initiated/ procurement of DEM and C/s is in progress with SOI
2	Flood forecasting of Dimapur Town, Nagaland	Nagaland		TOR initiated/ procurement of DEM and C/s is in progress with SOI

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3	Flood forecasting of Imphal basin	Manipur		TOR initiated/ procurement of DEM and C/s is in progress with SOI
4	Establishment of inflow forecast, flood forecast and warning system in West Bengal for Kangsabati Keliaghai –Shilabati and Dwarakeswar	West bengal SW		TOR finalised , Prebid for C/s is initiated
5	Inflow forecasting system of Ranjit Sagar Dam and Inundation forecasting system downstream of Ranjit Sagar Dam	Punjab		Prebid meeting held
6	Inflow forecasting system damodar basin upto outfall of damodar	DVC		Work awarded
7	Flood forecasting kerala For Periyar Basin	Kerala		Under progress
8	Inflow forecasting and sedimentation analysis of 6 small to medium reservoirs of Bihar (Kharapur , Kohira, Phoolwari, Durgawati , Budua, Upper kiul)	Bihar SW		Under progress
9	DSS FoR Himachal(Beas) , Kerala SW(Bharatpuzza) , Ap SW(Krishna Delta) , Rajasthan(Banas and other basin) , Maharastra (godavari basin), Tamilnadu (IWRM and village level mapping) under Package B of DSS (PM)	NIH		To be initiated
D	Atlas and Guidelines for Ground Water			
1	Groundwater atlas	DoWR		Under progress
2	Census of Groundwater extraction structures	DoWR		Under progress
3	Spring monitoring guideline for Mizoram	DoWR		completed disseminated to stakeholders
C	Manuals and Guidelines			
1	Prepared "Guideline for Setting up of Water Quality Laboratory and Network of Monitoring in Water Resources Departments".	DoWR		completeddisseminated to stakeholders
2	Compiled base line inventory of infrastructure, instrumentation, water quality parameters, analysis methodology, manpower and analytical quality control for 31 functional laboratories in nine State IAs Viz. Goa (1), Himachal Pradesh (9), Kerala GW (3), Madhya Pradesh (4), Maharashtra (6), Punjab (2) and Puducherry (1),Tamilnadu (3),Telangana GW (2).	DoWR		completeddisseminated to stakeholders
3	Prepared modal vision document for water quality assessment and upgradation of laboratory for North Eastern State IAs.	DoWR		completeddisseminated to stakeholders