

Global Water Monitor & Forecast Watch List

October 15, 2020

For more information, contact:

Thomas M. Parris, President, 802-864-2999, parris@isciences.com

Table of Contents

Introduction	2
Worldwide Water Watch List.....	4
Watch List: Regional Synopsis.....	4
Watch List: Regional Details.....	6
United States.....	6
Canada	8
Mexico, Central America, and the Caribbean	10
South America.....	12
Europe.....	15
Africa	17
Middle East	20
Central Asia and Russia	22
South Asia	24
Southeast Asia and the Pacific.....	26
East Asia.....	28
Australia & New Zealand.....	30

Introduction

The ISciences Water Security Indicator Model (WSIM) monitors and forecasts water anomalies on a global basis. Each month we produce data and a report that document current conditions and provide forecasts with lead times from 1-9 months. WSIM has been run continuously since April 2011 and has been validated against subsequently observed data.

ISciences also provides assessments of the impacts of water anomalies on people, agriculture, and electricity generation. Detailed data and reports are available for purchase. Additional information and pricing are available upon request.

We have recently completed the latest Water Security Indicator Model (WSIM) analysis of global water anomalies using observed temperature and precipitation through September 2020 and an ensemble of forecasts issued the last week of September 2020. This edition of *Global Water Monitor & Forecast Watch List* presents a selection of regions likely to encounter significant water anomalies in the next few months. This report uses results from WSIM Version 2. Visit <https://wsim.isciences.com> for details.

All maps have half-degree resolution and depict our composite water anomaly index, which is based on WSIM estimates of soil moisture, evapotranspiration deficit, runoff, and total blue water anomalies. Shades of red indicate deficits and shades of blue indicate surpluses. Since different variables are used to estimate deficits and surpluses, it is possible for a single half-degree cell to register both a deficit and a surplus in a given month. These cases are depicted on the maps in shades of purple, with the more extreme value (deficit or surplus) used to determine the shade.

Deficits and surpluses are stated in terms of return period – a measure that characterizes the rarity of an anomaly. For example, a return period of 10 years indicates an anomaly that would occur, on average, once every ten years. Higher return periods indicate more extreme and, therefore, more disruptive anomalies. Anomaly levels correspond to return periods: abnormal=3-5 years, moderate=5-10 years, severe=10-20 years, extreme=20-40 years, and exceptional=greater than 40 years. Return period is computed by comparison to cell-specific distributions of data from 1950 through 2009.

Please note that the WSIM model makes use of seasonal temperature and precipitation forecasts produced by the U.S. National Oceanic and Atmospheric Administration (NOAA) Climate Forecast System Version 2 (CFSv2). These forecasts predict broad temperature and precipitation patterns, but do not effectively predict singular events such as tropical storms. Detailed outlooks and analyses of tropical storms are available from the [NOAA National Hurricane Center](#).

There are numerous regions around the world where country borders are contested. ISciences depicts country boundaries on these maps solely to provide some geographic context. The boundaries are nominal, not legal, descriptions of each entity. The use of these boundaries does not imply any judgement on the legal status of any territory, or any endorsement or acceptance of disputed boundaries on the part of ISciences or our data providers.

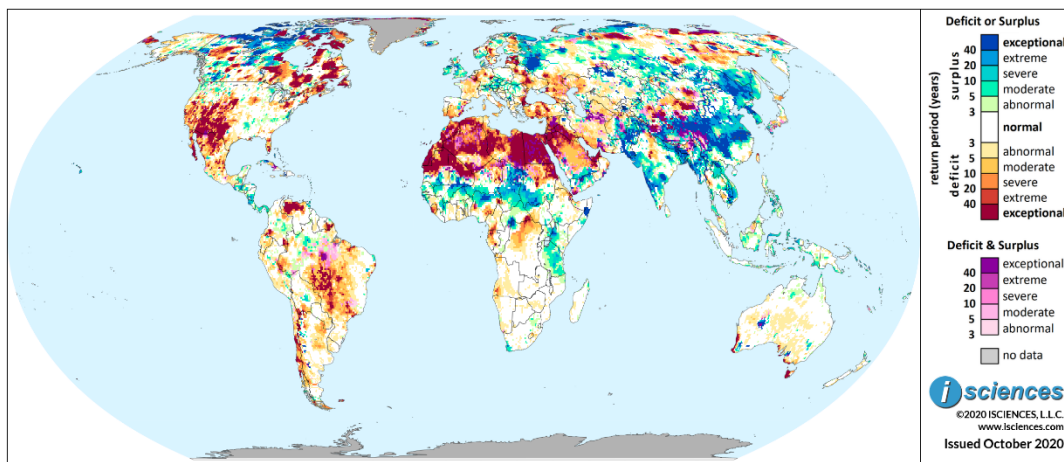
Copyright 2020 ISCIENCES, L.L.C. Global Water Monitor & Forecast Watch List is the property of ISCIENCES, L.L.C. It is protected by U.S. copyright laws and may not be reproduced in any way without the written permission of ISCIENCES, L.L.C.

The user assumes the entire risk related to user's use of information in ISCIENCES, L.L.C. Global Water Monitor & Forecast: Watch List, including information derived from Water Security Indicators Model (WSIM). This information may include forecasts, projections and other predictive statements that represent ISCIENCES, L.L.C.'s assumptions and expectations in light of currently available information and using the highest professional standards. Actual results may differ from those projected. Consequently, no guarantee is presented or implied as to the accuracy of specific forecasts, projections or predictive statements contained herein. ISCIENCES, L.L.C. provides such information "as is," and disclaims any and all warranties, whether express or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose. In no event will ISCIENCES, L.L.C. be liable to you or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of this data.

Worldwide Water Watch List

This map presents a selection of regions likely to encounter significant water anomalies during the one-year period beginning in July 2020 and running through June 2021 using 3 months of observed temperature and precipitation data and 9 months of forecast data.

ISciences Water Anomalies Forecast: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

Watch List: Regional Synopsis

This synopsis provides highlights of regional water forecasts. More detailed analysis is available in “Watch List: Regional Details” immediately following the synopsis.

United States: The forecast through December indicates that water deficits will shrink in the West and Southwest, downgrading considerably, but will remain intense in the Northeast and in Florida, and will emerge in the central Plains.

Canada: The forecast through December indicates many areas of intense water deficit in the Maritimes, Newfoundland, Quebec, and Ontario. Widespread surpluses are expected in northern Manitoba and Saskatchewan. Surpluses in British Columbia will be intense near Kelowna.

Mexico, Central America, and the Caribbean: The forecast through December indicates water deficits in much of Mexico outside of the Yucatán. Anomalies will be intense in southern Baja, Chihuahua, Coahuila, and eastern states. Surpluses are forecast in pockets of Central America and the Caribbean.

South America: The forecast through December indicates that water deficits will shrink considerably, but intense deficits are forecast in Venezuela, French Guiana, far eastern Brazil, and Chile. Severe deficits are forecast in Brazil from Mato Grosso do Sul through São Paulo State.

Europe: The forecast through December indicates that water deficits will shrink considerably, persisting primarily in the Baltics, Belarus, and Sweden. Surpluses will increase in Austria and Czech Republic, reaching well into surrounding nations, and will persist in Ireland, U.K, and European Russia.

Africa: The forecast through December indicates that water deficits in North Africa will moderate though some large pockets of exceptional deficit are expected in the western Sahara Desert. Surpluses are forecast in the Sahel, East Africa, northern Somalia, and pockets of South Africa.

Middle East: The forecast through December indicates that exceptional water surpluses will persist around Mosul and severe surpluses in northwestern Iran. Moderate deficits are forecast in eastern Syria, much of Iraq and Saudi Arabia, and pockets of central Iran.

Central Asia and Russia: The forecast through December indicates water surpluses in northern European Russia, the Ob River Watershed, and the Middle Yenisei River. Areas of intense deficit include the Lower Yenisei region and the Lena River Watershed. Exceptional surpluses will emerge on the Amu Darya River.

South Asia: The forecast through December indicates that widespread water surpluses will persist in western India and the Deccan Plateau, Bangladesh, eastern Nepal, and many regions of Pakistan and Afghanistan. Intense deficits will emerge in Uttarakhand and Himachal Pradesh.

Southeast Asia and the Pacific: The forecast through December indicates that water deficits will nearly disappear. Many areas of surplus are forecast including Vietnam, Laos, eastern Cambodia, and central Indonesia. Surpluses will be exceptional on the Mekong River through Cambodia and Vietnam.

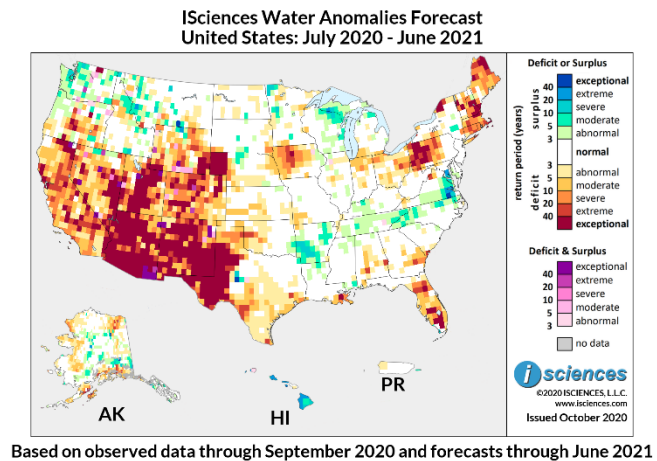
East Asia: The forecast through December indicates that water surpluses in China will remain widespread in the Yellow and Yangtze River Watersheds and in Northeast China, with exceptional anomalies shrinking in the river basins but increasing in the Northeast. Deficits are forecast in Japan.

Australia & New Zealand: The forecast through December indicates near normal conditions as exceptional deficits retreat. Deficits will persist in Australia's southwestern tip and Tasmania. Areas of surplus include the central Murray-Darling Basin and the Avon River region in Western Australia.

Watch List: Regional Details

United States

The 12-month forecast ending June 2021 indicates widespread water deficits in the southwest quadrant of the continental U.S. from Wyoming through West Texas and reaching west through California. Deficits will be exceptional in many areas including nearly all of Arizona and large blocks in New Mexico, Utah, and as far north as western Nebraska. Severe to extreme deficits are forecast on the Canadian River through western Oklahoma and the Texas Panhandle, and primarily moderate deficits following the Gulf Coast in Texas.



The Pacific Northwest can expect deficits in central Oregon and pockets of surplus in Washington, northern Idaho, and western Montana along with a few small pockets of deficit as well.

In the Upper Midwest, moderate surpluses are forecast on Nebraska's northern border and poking into South Dakota. Some pockets of surplus are also forecast in northwestern Minnesota. Iowa will see deficits that will be extreme in the middle region of the Des Moines River. Around the Great Lakes, surpluses are forecast for northeastern Wisconsin into northern Michigan. Some moderate deficits will skirt Michigan's southern border and reach from northern Illinois through Ohio, becoming intense and widespread in western Pennsylvania. Deficits of varying intensity are expected in the U.S. Northeast with exceptional deficits in the St. Lawrence River region of Upstate New York and pockets in Vermont, New Hampshire, and Maine.

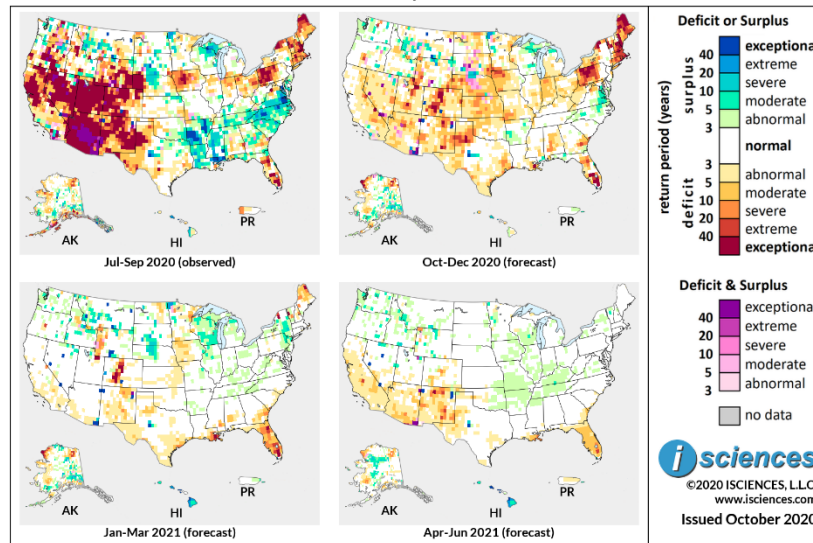
Surpluses are forecast from Washington, D.C. past Richmond, Virginia into North Carolina, and will be extreme east of D.C. and extreme to exceptional from Richmond to the North Carolina border. Moderate surpluses are expected spanning the Tennessee/North Carolina border, and moderate to severe surpluses in Arkansas.

Deficits are expected in much of Florida outside of the Panhandle with extreme deficits northwest of Orlando and exceptional deficits south of Lake Okeechobee and around Lake Istokpoga. Pockets of deficit are also forecast for southeast Georgia, central Alabama, and New Orleans.

Outside the contiguous U.S., surpluses are forecast for much of Hawaii. Alaska can expect deficits near Kodiak, Anchorage, and past Valdez; in the northeast; and in pockets of the west. Surpluses are forecast north of Iliamna Lake, in the center of the state, and from Denali east to the Canadian border.

The 3-month maps (below) show the evolving conditions in more detail.

**ISciences Water Anomalies Forecast
United States: July 2020 - June 2021**



Based on observed data through September 2020 and forecasts through June 2021

From October through December the overall forecast indicates that surpluses from the Lower Mississippi River through the Virginias will nearly disappear, leaving a few pockets in Arkansas and in the east from Washington, D.C. to Raleigh, North Carolina. Deficits in the U.S. West and Southwest will shrink and downgrade considerably becoming mild to moderate overall though intense deficits are forecast in some regions including Colorado and pockets of Utah, western Nebraska, New Mexico, and the central Panhandle Plains of Texas. Deficits will downgrade slightly in western Iowa but will emerge in many parts of Nebraska, Kansas, northern Oklahoma, southwestern Missouri, and pockets of eastern and southern Texas.

Pockets of surplus are forecast for the Pacific Northwest and western Montana, and pockets of deficit in North Dakota. Mixed conditions are expected in South Dakota and Minnesota, and moderate surpluses in northern Michigan and east-central Wisconsin. Moderate deficits will continue in the northern Ohio River Watershed, but deficits will remain intense in western Pennsylvania and in the U.S. Northeast. In Peninsular Florida, deficits will be intense in the south but will downgrade slightly north of Orlando. Moderate to extreme deficits will increase in Alabama and southeastern Georgia.

From January through March 2021, normal water conditions will return to many regions as deficits shrink but intense deficits are forecast for central Colorado, New Orleans, and Peninsular Florida. Deficits will shrink and moderate in northern Maine. Deficits elsewhere include Iowa, western Wyoming, New Mexico, and coastal Texas. Surpluses are forecast for Wisconsin, northern Michigan, northwestern Minnesota, from central South Dakota into Nebraska, and pockets of Montana and Idaho.

The forecast for the final months – April through June 2021 – indicates pockets of intense deficit in New Mexico, and moderate deficits in Peninsular Florida, New Orleans, and pockets of central Colorado, Arizona, and Southern California. Isolated pockets of moderate surplus are expected in the Northern Rockies and Pacific Northwest. Please note that WSIM forecast skill declines with longer lead times.

Canada

The 12-month outlook for Canada through June 2021 indicates vast areas of water deficit in the eastern half of the nation. Areas of exceptional deficit include a wide path on Quebec’s northeastern border leading into western Labrador, a large block west of Lake Mistassini in Quebec, and a column spanning the Quebec/Ontario border.

Deficits will also be intense in Newfoundland,

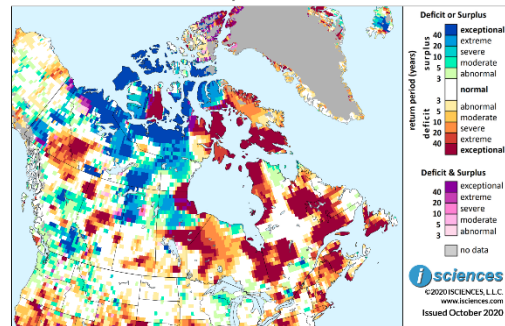
New Brunswick, and much of Northern Ontario’s Kenora District. Surpluses are forecast in Quebec south of Lake Saint-Jean, and in Ontario west of Ottawa and on Hudson Bay in the northeast.

Exceptional deficits are forecast on Hudson Bay in Manitoba, a belt across the center of the province north of Lake Winnipeg reaching into Ontario, and around Winnipeg. Large pockets of surplus are forecast in north central and northwestern Manitoba. Deficits will reach exceptional intensity in a belt in southern Saskatchewan reaching through Regina; the Middle Reaches of the Athabasca River Watershed in central Alberta; and Alberta’s northwest corner spanning the border with British Columbia. Deficits are also forecast for northern British Columbia, intensifying as they reach well into the Yukon and Northwest Territories.

Much of northern Saskatchewan can expect conditions of extreme to exceptional surplus leading north well past Lake Athabasca into the Northwest Territories and west across the border with Alberta. Surpluses are also expected around Calgary, Alberta. In British Columbia, moderate surpluses are expected around Fort St. John, exceptional surpluses west of Williston Lake in the north, and surpluses of varying intensity in the central Fraser River Watershed in the south where surpluses will be exceptional near Kamloops.

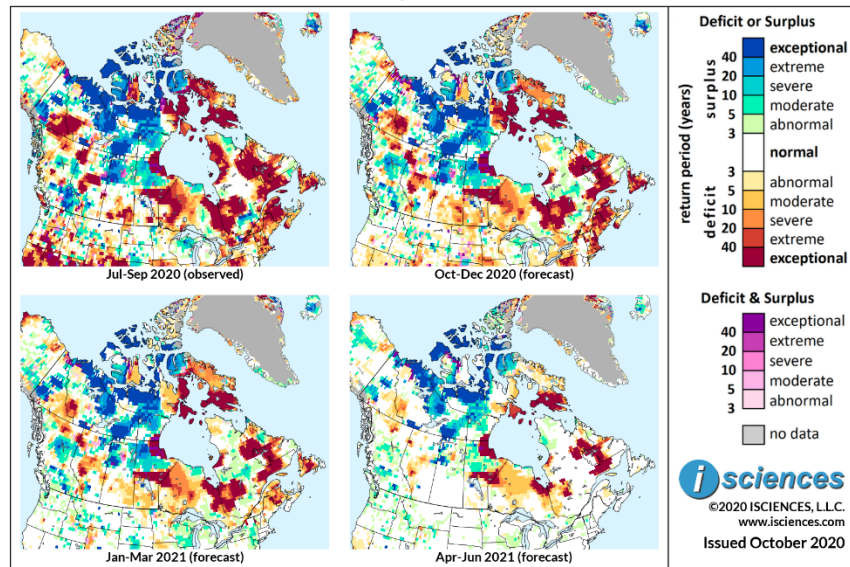
The 3-month maps (below) show the evolving conditions in more detail.

Isciences Water Anomalies Forecast
Canada: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

Isciences Water Anomalies Forecast
Canada: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that vast areas of exceptional deficit will persist along Quebec’s border into Labrador, at the mouth of the St. Lawrence River, and west of Lake Mistassini. Intense deficits are also forecast in Newfoundland, New Brunswick, and southern Nova Scotia, and deficits of varying intensity from Montreal through the Gaspé Peninsula. Deficits in Southern Ontario will downgrade, exceptional deficits will persist in a column along the northern Quebec/Ontario border, and deficits in Northern Ontario’s Kenora District will remain widespread. Surpluses will persist in Ontario where James Bay joins Hudson Bay, and will shrink and moderate in Quebec south of Gouin Reservoir.

In Manitoba, exceptional deficits will persist along Hudson Bay and across the center of the province, with surpluses intensifying between. Deficits will increase in the southern half of the province, downgrading near Winnipeg. Deficits are forecast in southeastern Saskatchewan and surpluses in the north. In Alberta, deficits will persist in the Middle Athabasca River region and in the northwest crossing into British Columbia; surpluses are expected near Calgary. In British Columbia, surpluses will increase around Lake Williston in the north, moderate in the south except near Kelowna, and emerge northeast of Vancouver. Deficits on Vancouver Island will shrink.

From January through March 2021, deficits will downgrade in the Maritimes, persist with intensity in large blocks of Quebec, moderate in southern Manitoba and Saskatchewan, downgrade in the Middle Athabasca River region of Alberta, and retreat from Vancouver Island. Surplus anomalies will persist in a pattern similar to the forecast for the prior three months.

The forecast for the final months – April through June 2021 – indicates that conditions in many regions of the country will normalize though pockets of exceptional deficit are forecast in the eastern half of the nation. Surpluses are expected in British Columbia, northern Saskatchewan, and northwestern Manitoba. Please note that WSIM forecast skill declines with longer lead times.

Mexico, Central America, and the Caribbean

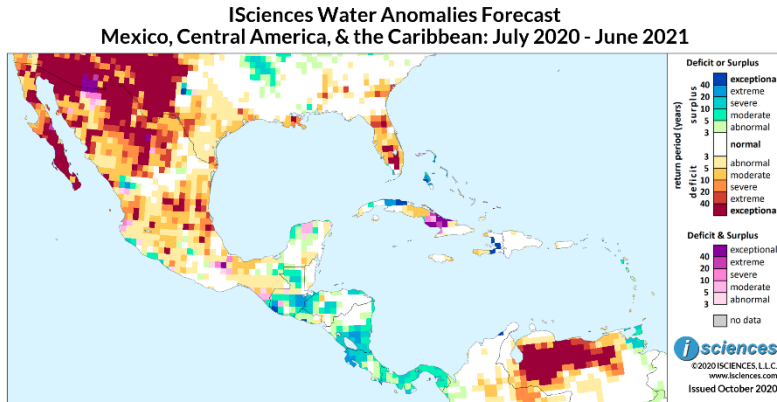
The 12-month forecast ending June 2021 indicates deficits of varying severity in northern and central Mexico. Anomalies will be exceptional in many areas of the north including the Baja Peninsula, northwestern Sonora, Chihuahua, and northeastern Durango.

In central Mexico, a wide belt of deficits will reach from Nayarit on the Pacific Coast to Tamaulipas and Veracruz on the Gulf of Mexico and will include small pockets of exceptional deficit. A few small pockets of surplus are forecast in southern Durango, coastal Colima and Michoacán, and the Yucatán.

Surpluses ranging from moderate to extreme are forecast in many regions Central America, particularly Guatemala, southern Nicaragua, and northern Costa Rica.

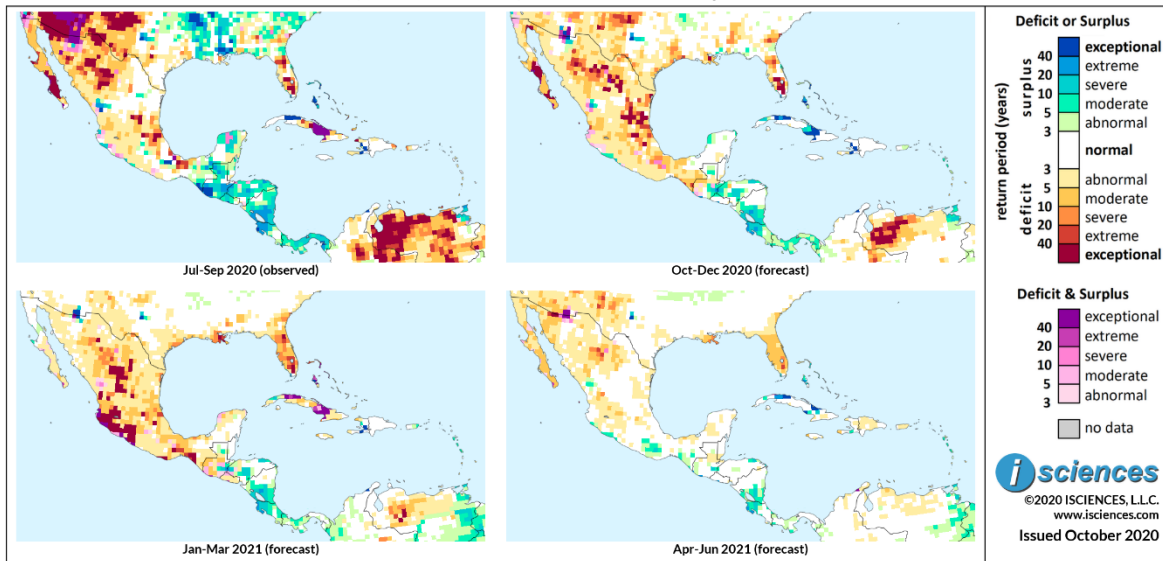
In Cuba, moderate deficits are expected in Sancti Spiritus and Ciego de Ávila Provinces in the center of the nation, and surpluses near Havana. Deficits will be severe in Turks and Caicos Islands, and surpluses are forecast for the Bahamas.

The 3-month maps (below) show the evolving conditions in more detail.



Based on observed data through September 2020 and forecasts through June 2021

ISciences Water Anomalies Forecast
Mexico, Central America, & the Caribbean: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates water deficits of varying intensity in much of Mexico outside of the Yucatán Peninsula. Though deficits will be mild to moderate in many regions, several large areas will experience more intense anomalies: deficits will be exceptional in southern Baja; severe to exceptional from southern Chihuahua through Coahuila; and severe to exceptional in a broad path from southern Nuevo León into San Luis Potosí, Tamaulipas, northern Veracruz, Querétaro, Hidalgo, and Tlaxcala. The Yucatán Peninsula will transition away from surplus to nearly normal conditions.

In Central America, surpluses will shrink and downgrade, but many pockets will persist throughout the region, particularly from southern Nicaragua into Costa Rica. Deficits in the Caribbean will nearly disappear, and some surpluses are forecast.

From January through March 2021, deficits will retreat from the Baja Peninsula, and shrink and downgrade in Chihuahua and Coahuila and from Nuevo León to Tlaxcala. However, exceptional deficits will emerge from eastern Durango into central Zacatecas, and in a path on the central Pacific Coast through Jalisco, Colima, and Michoacán. Intense deficits are also expected in Oaxaca and Chiapas in the south. Surpluses will persist in Nicaragua and Costa Rica and other pockets in Central America. Mixed conditions are forecast in the Caribbean with some deficits emerging in central Cuba and the Bahamas.

The forecast for the final three months – April through June 2021 – indicates that deficits in Mexico will shrink and downgrade leaving moderate anomalies in the north along with a few intense pockets. The remainder of the country can expect normal conditions with some mild deficits, and also some pockets of moderate surplus scattered near the Pacific Coast. Surpluses are forecast from Nicaragua into Costa Rica, and in pockets of the Caribbean.

Please note that WSIM forecast skill declines with longer lead times.

South America

The 12-month forecast through June 2021 indicates intense water deficits in a vast region of west-central Brazil, and in southern French Guiana, northern Venezuela, Colombia's southern corners, and pockets throughout much of Chile.

In Brazil, deficits will be widespread from eastern Rondônia, through Mato Grosso, Tocantins, Goiás, and Mato Grosso do Sul, leading to the Atlantic Coast through the state of São Paulo. Anomalies will be exceptional in many areas but particularly in Mato Grosso.

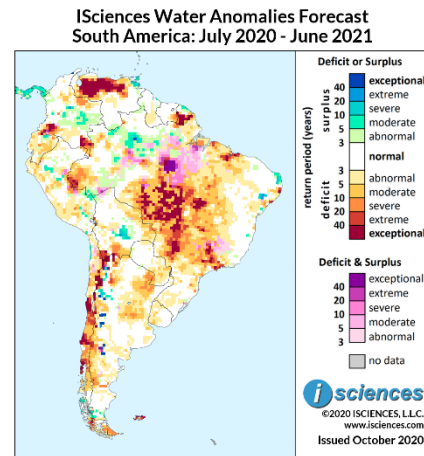
Deficits of varying intensity are forecast in Maranhão on Brazil's northern coast, and deficits and transitional conditions in its large neighbor, Pará. Some pockets of surplus are expected in the northern Amazon Basin while far western Brazil will see moderate to extreme deficits reaching across the border into Peru.

In Venezuela, exceptional deficits are forecast in a wide band north of the Apure and Orinoco Rivers, but surpluses are expected in the Orinoco Delta. Central Colombia can also expect surpluses with deficits in the south as previously mentioned. Pockets of moderate deficit are forecast in Ecuador and Peru, and intense deficits in pockets of southern Bolivia. Surpluses are forecast in central Bolivia near Santa Cruz.

Deficits of varying intensity are expected in Chile and across its border into Argentina. Deficits will include exceptional anomalies on the Bío-Bío River in south-central Chile and severe to exceptional deficits near Valparaíso and Santiago.

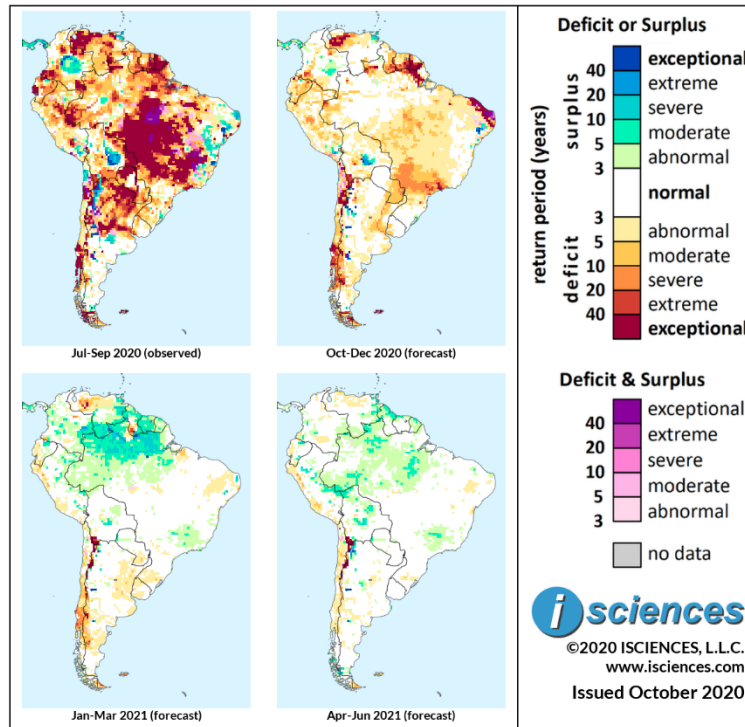
Moderate to severe deficits are forecast in Argentina's Chaco Austral region in the north and in the northern Pampas. Scattered, isolated surpluses will trail through western Argentina. In the south, severe deficits are forecast along the Chico River and in Tierra del Fuego, and deficits in the Falkland Islands will be exceptional.

The 3-month maps (below) for the same 12-month period show the evolving conditions in greater detail.



Based on observed data through September 2020 and forecasts through June 2021

ISciences Water Anomalies Forecast
South America: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that deficits will shrink and downgrade significantly. Near-normal conditions will return to the northern Amazon Basin and deficits in central Brazil will downgrade, becoming mild to moderate. Severe deficits are forecast in Mato Grosso do Sul and through São Paulo State to the Atlantic, spilling into São Paulo's neighboring states. Deficits will reach exceptional intensity northeast of the metropolis of São Paulo. Exceptional deficits will emerge in Brazil's easternmost tip.

Intense deficits remain in the forecast for pockets across the northern arc of the continent in northwestern Venezuela, southern Guyana and Suriname, and French Guiana. Surpluses and deficits will shrink in Colombia. Primarily moderate deficits are expected in Ecuador and Peru with some surpluses lingering in southern Peru. Surpluses in south-central Bolivia will shrink. Conditions in western Paraguay are expected to normalize and moderate deficits are forecast in the east. In Argentina, deficits on the Paraná River will be severe, and deficits in Tierra del Fuego and the Falklands will be extreme to exceptional. Deficits of varying intensity are forecast for Chile.

From January through March 2021, normal water conditions will return to many regions of the continent. Widespread surpluses will emerge from the northern Amazon Basin into southern and eastern Venezuela, northern Guyana, and Suriname. Intense deficits will persist in a pocket of southern Guyana, and deficits of lesser intensity are expected in northwestern Venezuela. Exceptional deficits will persist in Bolivia's southwestern tip and small pockets of intense deficits will follow Chile's border with Argentina. Moderate to extreme deficits are expected in central Chile.

In the final quarter – April through June 2021 – surpluses in the north will shrink considerably and the few pockets of deficit that had lingered in the north will retreat. Mild deficits are forecast for Chile, and some small pockets of exceptional deficit will persist in southern Bolivia.

Please note that WSIM forecast skill declines with longer lead times.

Europe

The 12-month forecast through June 2021 indicates water deficits from the Baltics to the Black Sea, and from northern Germany through France, and in the Iberian Peninsula. Widespread surpluses are forecast for northern European Russia, the U.K. and Ireland, and a large, tentacled region centered in Austria.

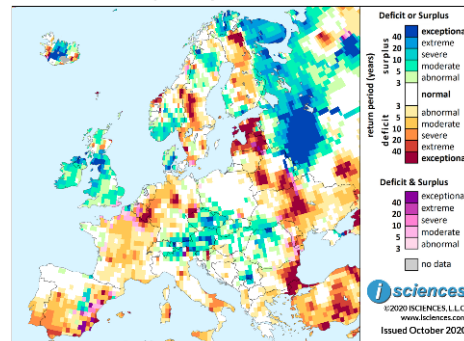
The vast path of deficit from the Baltics through Bulgaria includes many areas of extreme to exceptional deficit including much of Estonia and Latvia and large pockets in Belarus, central Ukraine, and eastern Bulgaria, and encompasses the capital cities of Riga (Latvia) and Kyiv (Ukraine). Widespread deficits of varying intensity are also forecast for much of Finland from Lapland through the vast Lakeland region, and central Sweden.

In Central Europe, deficits will be especially intense in Belgium and Luxembourg and the Harz and Erzgebirge Mountain ranges in Germany. Moderate deficits are forecast in France. On the Iberian Peninsula, moderate deficits are forecast near Madrid becoming extreme in southwestern Spain and southern Portugal. Mixed conditions are expected in eastern Spain including pockets of intense deficit on the coast and surpluses northeast of Madrid. Deficits are forecast for Sicily, Sardinia, a belt across southern Italy, and between Bologna and Florence.

Surpluses will be widespread throughout Austria and Czech Republic and will reach into surrounding nations. Other areas of surplus in the region include southeastern Ukraine well into Romania, and Serbia. The U.K., Ireland, Denmark, southern Norway, and northern Sweden can also expect surpluses. Anomalies will be exceptional in the Southern Uplands of Scotland. Widespread surpluses are expected in European Russia including a vast area of exceptional surplus west of Moscow.

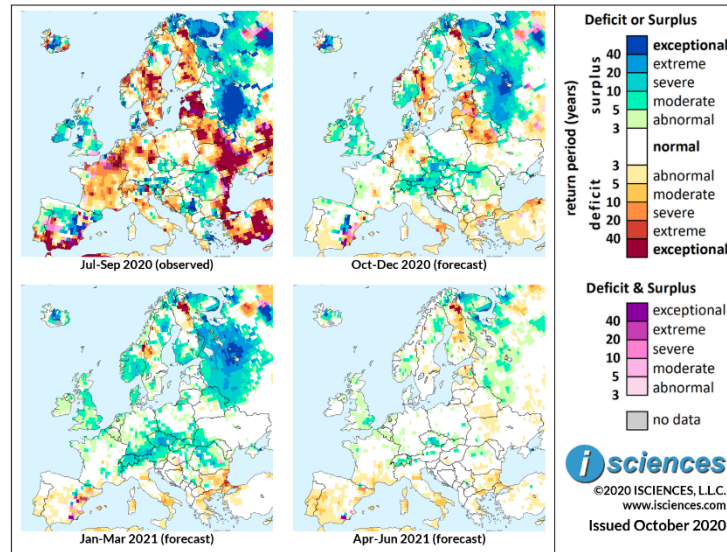
The 3-month composites (below) for the same 12-month period show the evolving conditions.

**ISciences Water Anomalies Forecast
Europe: July 2020 - June 2021**



Based on observed data through September 2020 and forecasts through June 2021

**ISciences Water Anomalies Forecast
Europe: July 2020 - June 2021**



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that deficits will shrink considerably, returning many areas to near-normal conditions. Deficits are forecast, however, for the Baltics, southern Belarus, eastern Lapland, central Sweden, southern Belgium, and a few pockets in Germany. Severe deficits will emerge in a belt across southern Italy and relatively mild deficits in the southern Balkans. Surpluses will increase in Austria and Czech Republic, reaching well into surrounding nations and along rivers, while surpluses in Romania shrink. Other areas with a forecast of surplus include Ireland and the U.K., Denmark, southern Norway, the Upper Tagus River region in Spain, and pockets along Spain’s northern coast. Surpluses will remain widespread in European Russia though the extent of exceptional surpluses will shrink somewhat.

From January through March 2021 deficits will nearly disappear. Intense deficits will persist in eastern Lapland and moderate to extreme deficits in a pocket of west-central Sweden. Some moderate deficits will linger in Italy and the eastern Balkans. Surpluses, primarily moderate, will increase in the center of Europe including Switzerland, Austria, Czech Republic, Slovakia, western Ukraine, Romania, and rivers in Hungary, and will reach into Germany and Poland. Anomalies continue to be extreme in Czech Republic. Moderate surpluses are also forecast in regions around the North Sea.

The forecast for the remaining months – April through June 2021 – indicates nearly normal conditions overall with pockets of surplus in European Russia and Central Europe, and deficits in Finland, pockets around the Mediterranean Sea, and the eastern Balkans.

Please note that WSIM forecast skill declines with longer lead times.

Africa

The 12-month forecast through June 2021 indicates widespread, intense water deficits across North Africa including many areas with exceptional anomalies. Mixed conditions of both deficit and surplus are also forecast as transitions occur (pink/purple).

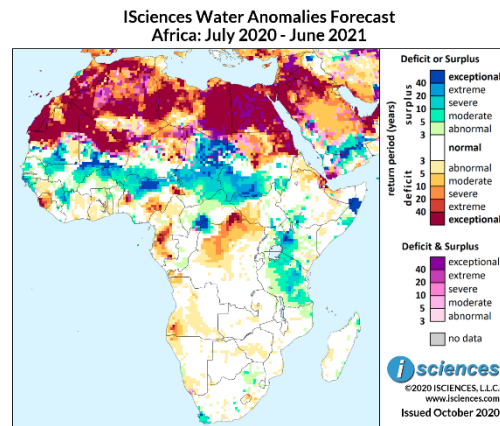
Surpluses of varying intensity are forecast across the Sahel, reaching into northern Nigeria where anomalies will be exceptional and southern Sudan where surpluses will be extreme to exceptional.

In the Horn of Africa, surpluses will be exceptional in the Nugaal region of northern Somalia but will be moderate slightly south and in south-central Ethiopia. Southern Eritrea and Djibouti can expect intense deficits.

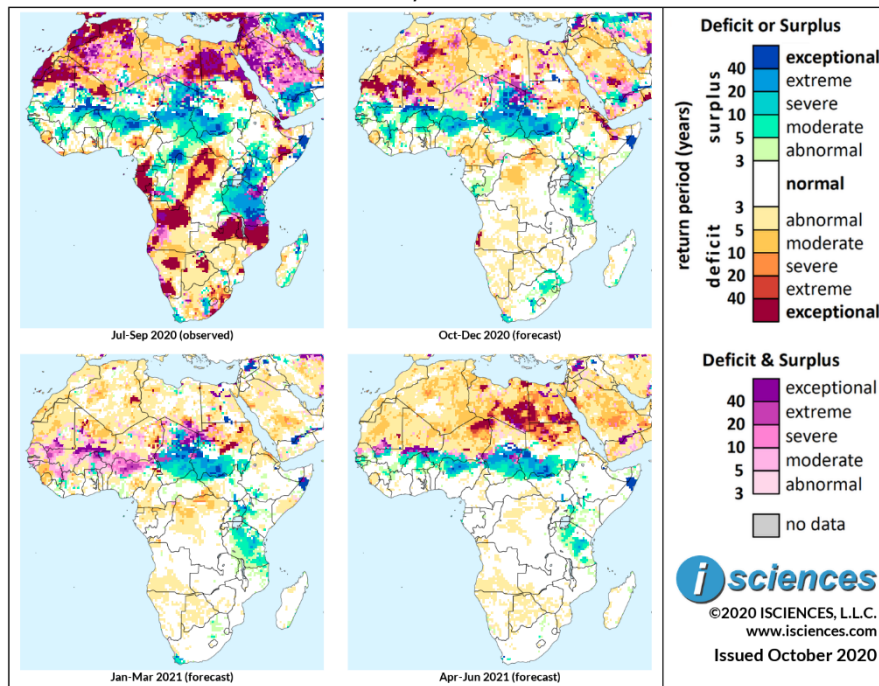
West Africa can expect surpluses in Senegal, Guinea Bissau, and from eastern Guinea into northwestern Côte D'Ivoire, but intense pockets of deficit are forecast in Sierra Leone and Nigeria. Intense surpluses are forecast in Central African Republic in a large pocket surrounding the capital city of Bangui and into Democratic Republic of the Congo. Surpluses are forecast in East Africa from eastern Uganda into western Kenya and in much of Tanzania. Anomalies are expected to be exceptional in western Kenya and severe in Dodoma, Tanzania.

Much of central and southern Africa will see nearly normal water conditions. However, deficits are expected around Cameroon's northern city of Maroua, and from south central Cameroon through Equatorial Guinea and Gabon and will include intense anomalies. Deficits are also forecast in northern Democratic Republic of the Congo and into southeastern Central African Republic where anomalies will be exceptional. Deficits of lesser intensity are forecast for Angola's northwestern and southwestern corners. Surpluses are forecast in South Africa's southwest corner fanning inland from Cape Town.

The 3-month maps (below) show the evolving conditions in greater detail.



ISciences Water Anomalies Forecast
Africa: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that deficits in Africa will shrink and downgrade considerably though some areas of exceptional deficit are expected in the western Sahara Desert, Eritrea into Ethiopia, and Angola's southwestern corner. Deficits in North Africa will moderate overall with some scattered, intense pockets and transitional conditions. Moderate deficits are expected in Sierra Leone, eastern Nigeria, and much of Cameroon and spanning the border with Central African Republic (CAR). Deficits will be more intense in CAR's southeastern corner and into northern Democratic Republic of the Congo (DRC). Moderate deficits are expected in the central Congo River Basin.

Surpluses of varying intensity will persist in a vast path across the Sahel, dipping into northern regions of Nigeria, CAR, and South Sudan. A pocket of exceptional surplus will persist in northern Somalia's Nugaal region. In East Africa, surpluses will shrink and downgrade but remain widespread. Surpluses will emerge in northeastern South Africa including Johannesburg and Pretoria, in Swaziland, and along the Limpopo River through southern Mozambique. Surpluses will persist in southwestern South Africa and from Orange Free State into Eastern Cape, while surpluses in Madagascar will nearly disappear.

From January through March 2021, deficits in North Africa will continue to downgrade becoming mild overall with a pocket of intense deficit in central Sudan. Moderate deficits will persist in Sierra Leone and will emerge in western Liberia. Deficits in northern DRC and CAR will shrink. Transitional conditions are forecast in the western Sahel, and persistent surpluses from Chad through southern Sudan and an intense pocket in northern Somalia. Surpluses will shrink somewhat in southern Ethiopia and Kenya and increase in Tanzania while moderating. Nearly normal water conditions are forecast in southern Africa, though surpluses will persist in a few pockets including southwestern South Africa.

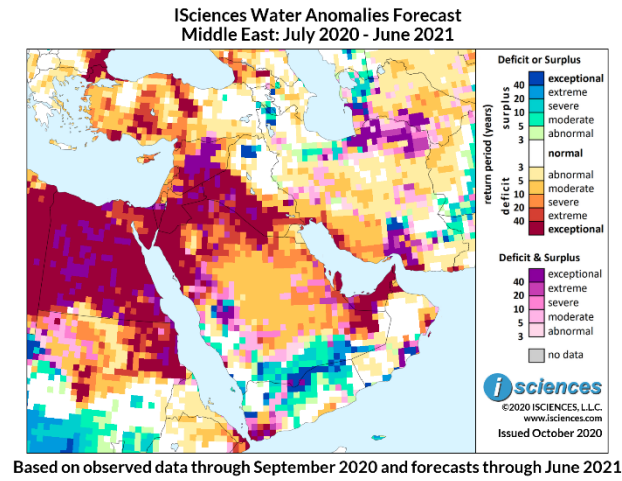
The forecast for the final quarter – April through June 2021 – indicates that deficits will increase in the north with intense deficits in the northeast. Surpluses are forecast in the Sahel, northern Somalia, and pockets of East Africa.

Please note that WSIM forecast skill declines with longer lead times.

Middle East

The forecast for the 12-month period ending June 2021 indicates water deficits in the Levant, much of Saudi Arabia, and around the Persian Gulf. Deficits will be exceptional in many areas including Jordan, Iraq west of the Euphrates River, northern Saudi Arabia, Qatar, and the United Arab Emirates. Transitional conditions are also forecast (pink/purple) in some pockets, particularly in Syria.

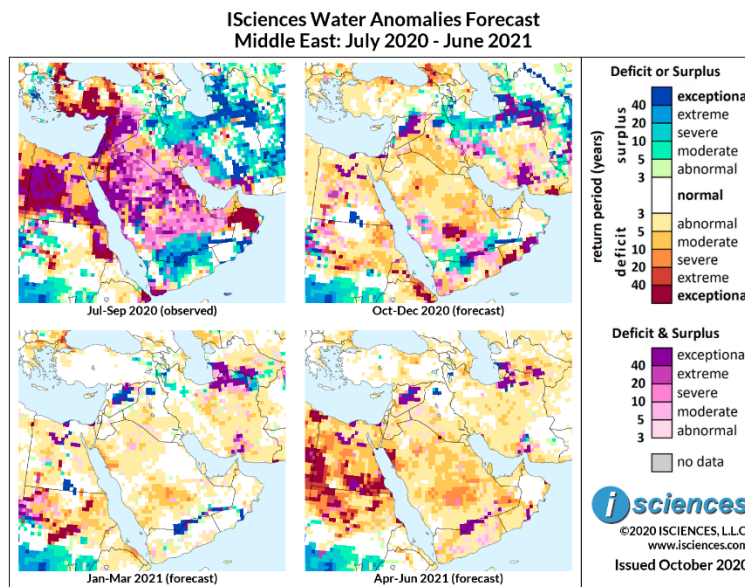
In the southern portion of the Arabian Peninsula, surpluses of varying intensity are expected along much of Saudi Arabia's border reaching well into Yemen. Mixed conditions and deficits are forecast for Yemen's southwestern tip.



Deficits of varying intensity are expected around the Persian Gulf moderating as they reach well into Fars Province in southern Iran and into pockets of central Iran. Surpluses are forecast in the southern province of Kerman leading to transitional conditions and deficits near the Strait of Hormuz. Surpluses are also forecast in northwestern Iran from Lake Urmia into Azerbaijan, and in a narrow belt in the north through Tehran leading to transitional conditions in the northeast near Turkmenistan. In Iraq, a pocket of exceptional surplus is forecast near Mosul.

Deficits ranging from moderate to exceptional are predicted for much of central and western Turkey and for Georgia.

The 3-month maps (below) show the evolving conditions in greater detail.



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that widespread surpluses in the region will shrink, intense deficits will shrink or downgrade overall, and moderate deficits will emerge in many areas formerly in transition. Surpluses will shrink considerably from northern Iraq through Iran, persisting with intensity around Mosul but downgrading in Iran's northwest quadrant. Transitional conditions are forecast in northeastern provinces near Turkmenistan and in the south from Kerman Province to the Strait of Hormuz. Moderate deficits will emerge in central Iran and exceptional deficits along the southeastern coast near Pakistan.

Moderate deficits are forecast from eastern Syria through Iraq west of the Euphrates River, large pockets throughout much of Saudi Arabia and in Oman and United Arab Emirates. A large block of exceptional deficit is forecast for southern Riyadh Province, Saudi Arabia. Surpluses and transitional conditions are expected spanning the Saudi border with Yemen and Oman. Exceptional deficits will retreat from northern Oman but emerge in the south.

In Turkey, deficits are forecast along the Black Sea Coast. Deficits in Georgia will increase and intensify.

From January through March 2021, deficits will shrink considerably leaving normal conditions in many parts of the region. Moderate to severe deficits will persist in southern Riyadh Province, Saudi Arabia, and Tabuk Province on the northern Red Sea. Intense surpluses will re-emerge in central Syria and will persist in Iraq surrounding Mosul. Surpluses in northwestern Iran will shrink considerably and moderate, persisting around Lake Urmia. Transitional conditions are forecast for northeastern Iran and in the south near the Strait of Hormuz. Surpluses spanning the southern Saudi border will shrink.

In the final quarter – April through June 2021 – surpluses will nearly disappear, persisting near Mosul, and deficits will increase, generally mild overall but moderate to severe in Saudi Arabia with deficits in Tabuk becoming exceptional.

Please note that WSIM forecast skill declines with longer lead times.

Central Asia and Russia

The 12-month forecast through June 2021 indicates surpluses in northern European Russia that will be exceptional along the Upper Volga River, in a vast pocket west of Moscow, and in the Vychedga Lowlands. Deficits of varying intensity are forecast in the Lower Volga region and Don River Basin (not shown).

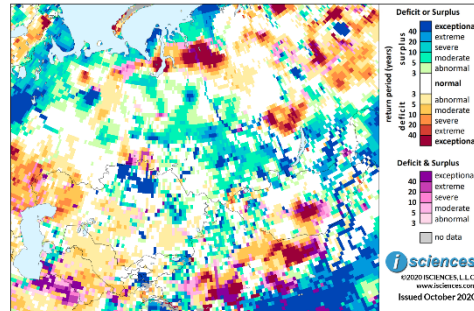
Surpluses are expected in the Ob River Watershed and the Middle and Upper Yenisei

River. Deficits will be exceptional on the central banks of the Gulf of Ob and in the region of the Lower Yenisei. Deficits are also forecast for much of the Lena River Watershed including intense deficits in the Lena River Delta (not shown) and the Upper Lena River region northwest of Lake Baikal.

In Kazakhstan, exceptional surpluses are expected in the north near the capital Nur-Sultan (Astana), surpluses of varying intensity in the eastern Kazakh Uplands, and moderate to severe deficits north of the Caspian Sea. Moderate deficits are expected in Turkmenistan and some pockets in southern Tajikistan. Intense surpluses are expected in the Fergana Valley and central Tajikistan. Eastern Kyrgyzstan can expect surpluses of lesser intensity.

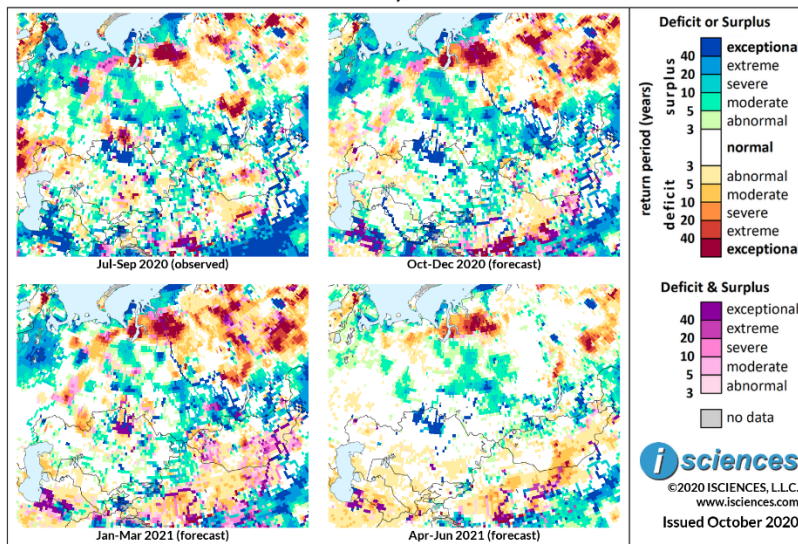
The 3-month composites (below) for the same 12-month period show the evolving conditions in more detail.

ISciences Water Anomalies Forecast
Central Asia: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

ISciences Water Anomalies Forecast
Central Asia: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that exceptional surpluses west of Moscow and in the Vychedga Lowlands will shrink slightly. Intense deficits in the Don River Basin and Lower Volga River

region will shrink and downgrade leaving mild anomalies overall, and deficits will emerge in the Ural River Watershed. Widespread surpluses will persist in the Ob River Watershed but exceptional deficits will persist on the central banks of the Gulf of Ob. Intense deficits will increase in the region of the Lower Yenisei River while surpluses along the Middle Yenisei River and the Angara, a right tributary, will intensify, becoming exceptional. On the Lower Ishim River, intense deficits will retreat, transitioning to surplus. Deficits will remain exceptional in the Lena River Delta (not shown), will increase and intensify in the Lena River Watershed south of Yakutsk, and though downgrading northwest of Lake Baikal, will be severe. In northern Siberia, exceptional deficits will increase in the Olenyok River Watershed.

In Kazakhstan, surpluses in the north near Nur-Sultan will remain exceptional and widespread. Moderate surpluses will emerge along the Syr Darya and Ile Rivers, and surpluses of varying intensity will persist in the eastern Kazakh Uplands. Exceptional surpluses will emerge on the Amu Darya River through Uzbekistan and Turkmenistan and into Tajikistan, and intense surpluses are forecast for the Turkmen-Iran border, central Tajikistan, and the Fergana Valley. Surpluses of varying intensity are expected in pockets of Kyrgyzstan and along the Naryn River.

From January through March 2021, surpluses will persist west and north of Moscow and in Vycheгда, and moderate surpluses will emerge on the Lower Volga River. Surpluses will shrink somewhat in the Ob River Watershed and intense surpluses will persist in the Upper Yenisei River Basin and along the middle reaches of the river itself. Intense deficits are expected to persist on the central shores of the Gulf of Ob, in the Lower Yenisei region, the Olenyok River Watershed, and the Lena River Watershed. Surpluses will moderate in Kazakhstan, persist in Tajikistan and Kyrgyzstan, and retreat from the Amu Darya River. Moderate deficits will emerge in western Kazakhstan on the central Caspian Sea Coast. Transitional conditions will increase on the Turken-Iran border.

The forecast for the final months – April through June 2021 – indicates that surpluses and deficits will shrink in Russia though surpluses will remain widespread in the Ob River Watershed. Deficits are forecast from the Gulf of Ob through the region of the Lower Yenisei River, and in the Upper Lena River Watershed. Surpluses will re-emerge in northern Kazakhstan, retreating elsewhere in the nation.

Please note that WSIM forecast skill declines with longer lead times.

South Asia

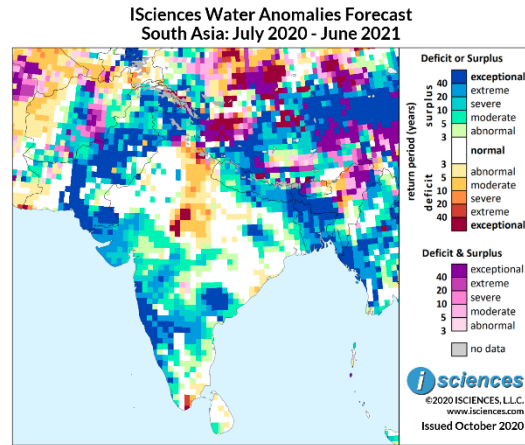
The 12-month forecast through June 2021 indicates widespread water surpluses in Bangladesh, Nepal, Pakistan, and many regions of India and Afghanistan.

Surplus conditions will dominate all of Bangladesh with extreme to exceptional anomalies in most regions. In Nepal, surpluses are expected throughout the country, severe in Kathmandu and exceptional along the Gandak River through the center of the nation and into India. Exceptional anomalies will prevail in Pakistan in the Hindu Kush, much of the Indus River Basin, and in a column from Quetta past Karachi in the south.

Afghanistan, too, will see surpluses of varying intensity, with severe anomalies in Kabul. Conditions of both deficit and surplus (pink/purple) are forecast in the Upper Helmand River region as transitions occur and moderate deficits are expected west of Herat and in pockets of the far north.

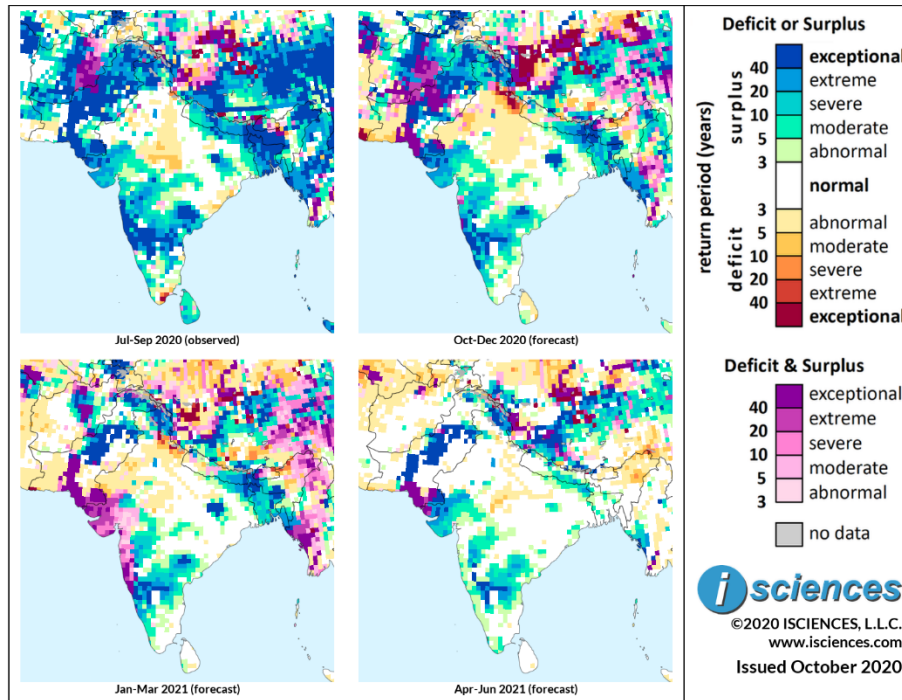
In India, surpluses will be widespread in the west and the Deccan Plateau, extending from Gujarat through Maharashtra, Goa, Karnataka, Telangana, Andhra Pradesh, and Kerala. Surpluses will be exceptional from Mumbai through Karnataka and in Telangana, and extreme in Gujarat. Surpluses are also forecast for Bihar, Jharkhand, West Bengal, and Jammu and Kashmir. Deficits are forecast in Himachal Pradesh, Uttarakhand, western Uttar Pradesh, and northwestern Madhya Pradesh, and in a pocket of southern India at the tip of Tamil Nadu. Deficits will be intense in Uttarakhand, Madhya Pradesh, and Tamil Nadu. India's Far Northeast can expect mixed conditions. Moderate surpluses are forecast for Sri Lanka's southwest corner.

The 3-month composites (below) show the evolving conditions in greater detail.



Based on observed data through September 2020 and forecasts through June 2021

ISciences Water Anomalies Forecast
South Asia: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that the distribution pattern of surplus in India will be much like that of the prior three months' observed conditions but the extent of exceptional anomalies will shrink somewhat in Telangana and Karnataka while increasing in Jharkhand. Deficits will retreat from Madhya Pradesh and Tamil Nadu, but intense deficits will emerge in Uttarakhand and Himachal Pradesh in the north, and moderate deficits will emerge in northwestern Rajasthan. Surpluses will shrink in India's Far Northeast with deficits emerging in central Assam. Surpluses will remain widespread in Bangladesh, but the extent of exceptional anomalies will shrink. In Nepal, surpluses will retreat from the west, persist in the east, and downgrade to mild on the Gandak River. Widespread surpluses will persist in Pakistan and Afghanistan, but vast areas of transition are also forecast. Moderate deficits will emerge in coastal Pakistan.

From January through March 2021, transitional conditions are forecast in India from Gujarat through Goa with surpluses persisting in aforementioned areas of the nation and throughout Bangladesh and eastern Nepal. Mild deficits are forecast for Rajasthan, and intense deficits in the north will shrink. Surpluses in Pakistan will shrink though widespread, exceptional anomalies will persist, re-emerging in some areas. In Afghanistan, surpluses will also shrink leaving surplus and transitional conditions in a wide column from Mazar-e-Sharif to the Pakistan border.

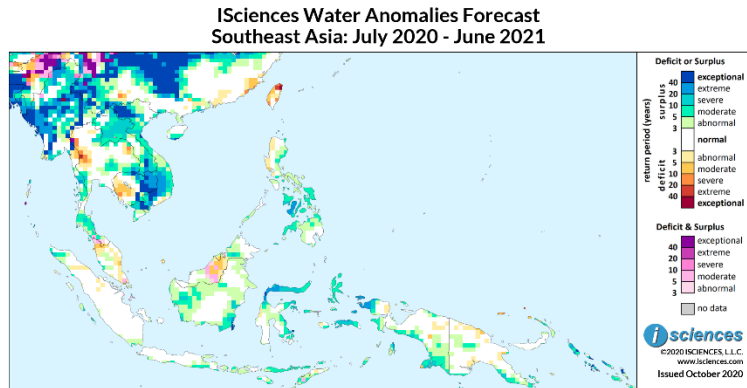
The forecast for the final months – April through June 2021 – indicates intense, widespread surpluses in Pakistan; and surpluses in western India, the Deccan Plateau, the Far North, and from eastern Nepal trailing into Bangladesh. Some deficits are forecast in India's Far Northeast, and nearly normal conditions in Afghanistan. Please note that WSIM forecast skill declines with longer lead times.

Southeast Asia and the Pacific

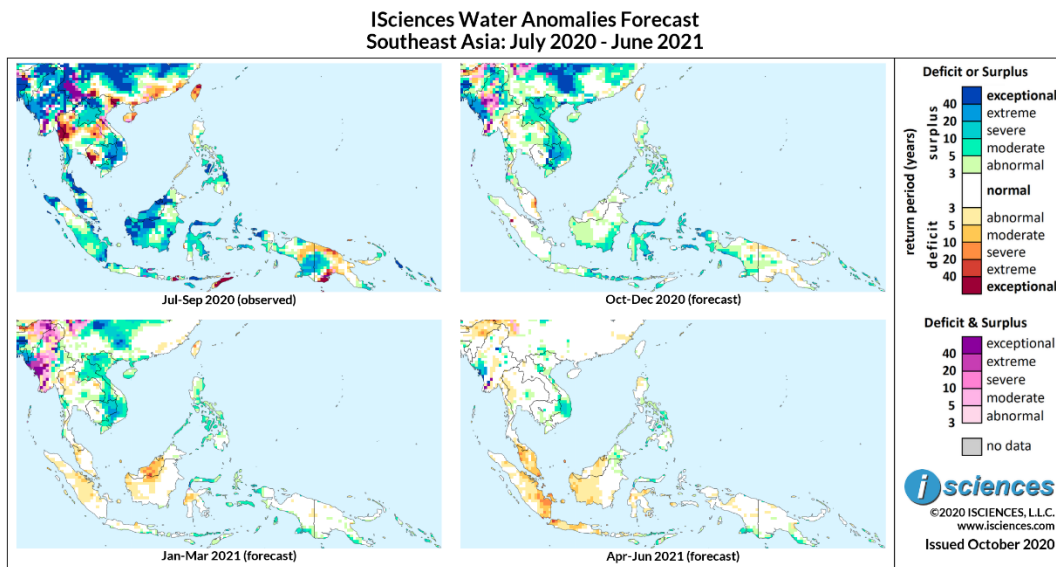
The 12-month forecast through June 2021 indicates some water deficits in western Thailand and in Cambodia from Tonlé Sap Lake to the coast.

Much of the rest of Southeast Asia can expect surpluses. In Myanmar, surpluses of varying intensity are forecast for nearly all the country and will be exceptional along the Salween River and extreme to exceptional from the Irrawaddy River to the west coast. Surpluses will also be intense from eastern Cambodia into southern Vietnam and southern Laos, and in northwestern Vietnam. Northern Laos can expect severe surpluses, and generally moderate surpluses are forecast for peninsular Myanmar, peninsula Thailand, and pockets in eastern Thailand.

Scattered surpluses are forecast throughout Indonesia including Sumatra's northern tip, pockets of Borneo, Flores Island, and from northern Sulawesi through the western portion of the Bird's Head Peninsula (Doberai Peninsula) in Papua, Indonesia and along Papua's southern coast. In Papua New Guinea, surpluses are expected in a pocket of the central New Guinea Highlands and along parts of the southern coast including the Bird's Tail Peninsula (Papuan Peninsula). Anomalies will be extreme in northern Sulawesi and the Bird's Head Peninsula. Moderate deficits are forecast for the Baram River region in Malaysian Borneo and into Brunei. Surpluses are also forecast for the central Philippines and anomalies will be extreme on Negros Island. The 3-month maps (below) show the evolving conditions in more detail.



Based on observed data through September 2020 and forecasts through June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that deficits in Southeast Asia will nearly disappear with a few isolated pockets persisting in northwestern Thailand. A pocket of deficit will emerge on peninsular Malaysia's central east coast. Surpluses are expected in nearly all of Vietnam and Laos and in eastern Cambodia. Anomalies will be exceptional on the Mekong River through Cambodia and Vietnam. Mixed conditions are forecast in Myanmar with intense surpluses west of the Irrawaddy River, surpluses of generally lesser intensity in the north and east, and transitional conditions (pink/purple) in the center of the nation and the Irrawaddy Delta.

In Indonesia, surpluses will shrink and downgrade overall but will remain widespread from southern Borneo into Papua, Indonesia and in the Lesser Sunda Islands. Anomalies will reach extreme intensity in some pockets. Deficits in New Guinea will nearly disappear. Moderate surpluses are forecast for the central Philippines.

From January through March 2021, widespread surpluses will persist in Laos, Vietnam, and eastern Cambodia. Exceptional surpluses will downgrade but anomalies will be extreme from eastern Cambodia into Vietnam. Nearly normal conditions are expected in Thailand with a few isolated pockets of surplus and of deficit. Transitional conditions are forecast for many regions of Myanmar along with lingering areas of surplus. Deficits, primarily moderate, will emerge in Malaysian Borneo and central Sulawesi. Surpluses will shrink considerably in Indonesia and Papua, Indonesia leaving pockets in northern Sulawesi, Flores Island, the Maluku Islands, and Papua. Moderate surpluses will emerge along parts of Papua New Guinea's southern shore, and moderate surpluses are forecast for the central Philippines and pockets in the north.

The forecast for the final months – April through June 2021 – indicates surpluses in pockets of Vietnam, western Myanmar, the central Philippines, and New Guinea's southern shore. Deficits will emerge in Malaysia, Sumatra, Java, and a few other isolated pockets in Indonesia.

Please note that WSIM forecast skill declines with longer lead times.

East Asia

The 12-month forecast for East Asia through June 2021 indicates widespread, intense surpluses in the Yellow (Huang He) and Yangtze River Basins. Conditions will include exceptional anomalies in the upper basin of the Yellow River and severe to extreme surpluses in the lower and middle areas of the basin.

In the Yangtze region, exceptional surpluses will dominate the lower watershed and the southern portion of the middle watershed.

Surpluses as well as transitional conditions (pink/purple) are expected in the river's upper basin. Between the Yellow and Yangtze Rivers surpluses of varying intensity are forecast.

Northeast China can expect widespread extreme to exceptional surpluses, and surpluses are expected on the Liaodong Peninsula in the northern Bohai Sea reaching well into Liaoning Province.

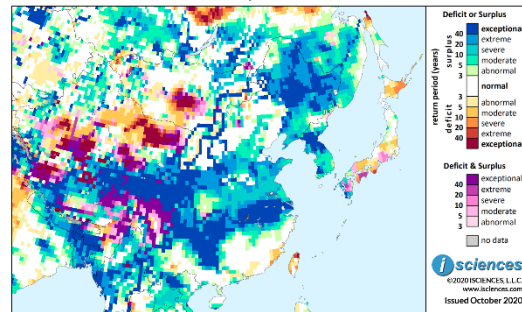
In southern and southeastern China, nearly normal conditions are forecast with moderate deficits in coastal Fujian but more intense deficits in pockets of Taiwan, particularly in the north. Exceptional surpluses are expected in northern Guangxi.

In Tibet (Xizang), intense deficits are forecast in the west, surpluses in the central region, and transitional conditions in the east. In China's vast northwest, surpluses are expected in northern Xinjiang Province, intense deficits and transitional conditions in the Taklimakan Desert, and moderate deficits in the northeastern region of the province leading to exceptional deficits in northern Gansu.

Exceptional deficits are also forecast in central Mongolia, and surpluses in the east and northwest. Surpluses are forecast for most of the Korean Peninsula and will be exceptional in North Korea. In Japan, deficits are predicted for Hokkaido and pockets of central and southern Honshu and Shikoku. Surpluses and transitional conditions are forecast for Kyushu.

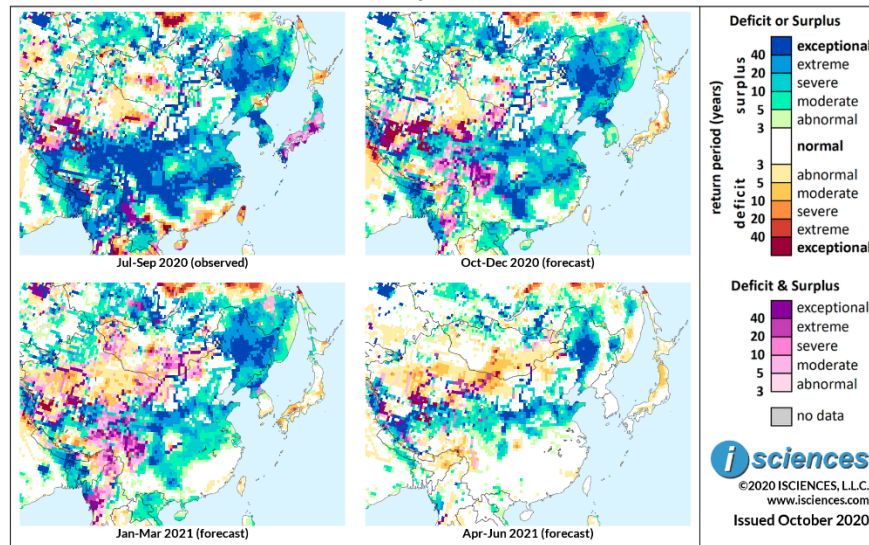
The 3-month time series maps below show the evolving conditions in more detail.

ISciences Water Anomalies Forecast
East Asia: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

ISciences Water Anomalies Forecast
East Asia: July 2020 - June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that surpluses in China will remain widespread in the Yellow and Yangtze River Watersheds though the extent of exceptional anomalies will shrink overall and transitional conditions will replace surpluses in western Sichuan and parts of Tibet. Exceptional surpluses will remain dominant along the lower and middle reaches of the Yangtze River itself, and south of the river in Guizhou and northern Guangxi Provinces. In Northeast China, widespread extreme to exceptional surpluses will persist. Deficits in southern and southeastern China will nearly disappear, transitioning to surplus conditions in southern Guangdong and nearby Hainan. Conditions will be complicated in Tibet and Xinjiang with intense deficits increasing in western Tibet and southern Xinjiang, and surpluses in northern Xinjiang. Deficits are forecast for western Qinghai and northern Gansu. Surpluses will cover the Korean Peninsula, downgrading in the south but remaining exceptional in North Korea. Deficits are forecast in Japan with some lingering surpluses in southern Kyushu.

From January through March 2021, surpluses in China's Yellow and Yangtze River Watershed will downgrade. Surpluses will be severe to extreme in the Yellow River Watershed and moderate to severe in the Yangtze region with pockets of exceptional deficit in primarily the upper regions of both basins. Normal conditions are forecast for southeastern China and some surpluses in coastal regions of the south. Exceptional deficits in Xinjiang will decrease and mild deficits will increase. Widespread surpluses will persist in northeastern China. Normal conditions will return to South Korea, but surpluses will persist in North Korea, though the extent of exceptional anomalies will decrease. Some pockets of deficit are expected in Japan, and moderate surpluses will emerge in western Hokkaido.

The forecast for the final three months – April through June 2021 – indicates normal conditions in southern China and the Korean Peninsula, surpluses in the Yellow River Watershed and in China's northeast, and deficits in Xinjiang, central Mongolia, and Japan. Please note that WSIM forecast skill declines with longer lead times.

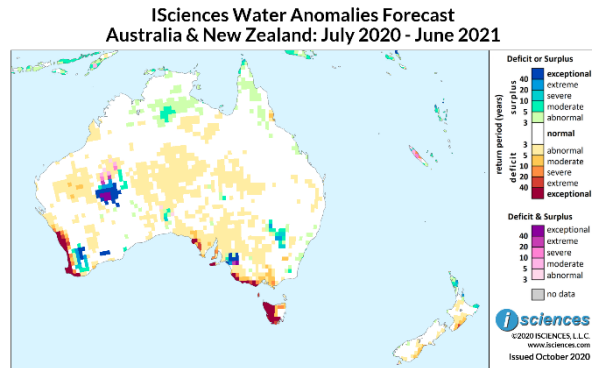
Australia & New Zealand

The 12-month forecast through June 2021 indicates surpluses in a pocket of the central Murray-Darling Basin in southeastern Australia and at the mouth of the Murray. Surpluses will be moderate to extreme between the Lachlan and Macquarie Rivers in New South Wales and exceptional between the mouth of the Murray and the Victoria border in South Australia.

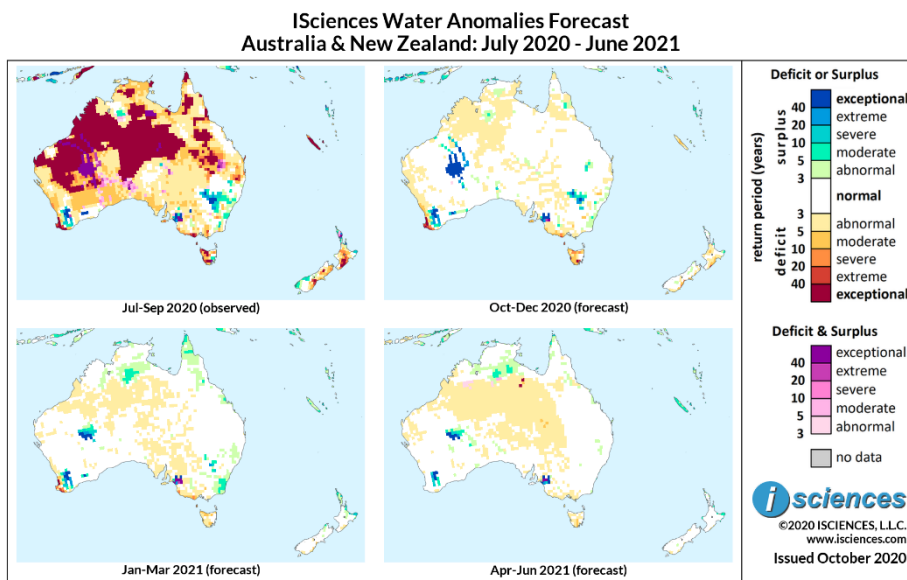
Tasmania can expect exceptional deficits in the west and from Hobart along the Derwent Estuary. Some pockets of intense deficit are also forecast along Victoria’s west coast and on Kangaroo Island in South Australia and along that state’s coast. In Western Australia, exceptional deficits are forecast along the southwest coast from Geraldton through Perth and past Busselton and the Lower Blackwood River region. Surpluses are forecast from the Upper Blackwood River region through the Avon River region east of Perth. The Gibson Desert will also see surpluses including exceptional anomalies spanning its western edge and some transitional conditions. In Northern Territory, a pocket of moderate surplus is forecast east of the Victoria River.

In New Zealand, surpluses are expected north of Auckland and on the points framing the Bay of Plenty. Deficits are forecast from northeast of Wellington to Hawke’s Bay. On South Island, some deficits are expected along the east coast between Christchurch and Dunedin. Mixed conditions are forecast in New Caledonia.

The 3-month maps (below) show the evolving conditions in greater detail.



Based on observed data through September 2020 and forecasts through June 2021



Based on observed data through September 2020 and forecasts through June 2021

The forecast through December indicates that much of Australia will return to near normal conditions as widespread, exceptional deficits retreat. Deficits will persist along the nation's southwest coast; anomalies will be moderate near Perth but increasingly intense further south through Busselton and the Lower Blackwood River region. Surpluses are expected nearby in the Avon River region and anomalies will reach exceptional intensity. Intense surpluses are also forecast in the Gibson Desert of Western Australia and spanning its western reaches with anomalies of lesser intensity creating paths leading both north and south. In the east, surpluses will persist in the central Murray-Darling Basin between the Macquarie and Lachlan Rivers in New South Wales and from the mouth of the Murray in South Australia to the Victoria border. Some moderate surpluses will persist in Queensland at the northwestern edge of the Darling Downs. Deficits will downgrade on Victoria's western coast and in Tasmania, while remaining intense near Hobart and in the Derwent Estuary.

In New Zealand, deficits and surpluses will shrink considerably, leaving deficits along the eastern coasts from Hawke's Bay in the north and between Christchurch and Dunedin in the south. Surpluses will moderate on the points framing the Bay of Plenty on North Island. Deficits in New Caledonia will shrink and moderate.

From January through March 2021, deficits will shrink in Australia's southwestern tip, become mild in Tasmania, and some relatively mild deficits will persist along Victoria's west coast. Surpluses will persist in the west in the Avon River region and spanning the southwest corner of the Gibson Desert. Some pockets of moderate surpluses will emerge east of the Victoria River in Northern Territory and in the Cape York Peninsula in northern Queensland. Surpluses will shrink in the central Murray-Darling Basin, transitional conditions will persist at the river's mouth, and moderate surpluses will increase near Canberra. Nearly normal conditions are expected in New Zealand and New Caledonia with some pockets of surplus.

The forecast for the final months – April through June 2021 – indicates nearly normal conditions for much of the region with pockets of surplus in the Avon River region, southwest of the Gibson Desert, in Northern Territory, at the mouth of the Murray River, and in New Caledonia.

Please note that WSIM forecast skill declines with longer lead times.