# = Geography of Ireland =

Ireland is an island in northwest Europe in the north Atlantic Ocean . The island lies on the European continental shelf , part of the Eurasian Plate . The island 's main geographical features include low central plains surrounded by coastal mountains . The highest peak is Carrauntoohil ( Irish : Corrán Tuathail ) , which is 1 @,@ 041 metres ( 3 @,@ 415 ft ) above sea level . The western coastline is rugged , with many islands , peninsulas , headlands and bays . The island is bisected by the River Shannon , which at 360 @.@ 5 km ( 224 mi ) with a 102 @.@ 1 km ( 63 mi ) estuary is the longest river in Ireland and flows south from County Cavan in Ulster to meet the Atlantic just south of Limerick . There are a number of sizeable lakes along Ireland 's rivers , of which Lough Neagh is the largest .

Politically , the island consists of the Republic of Ireland , with jurisdiction over about five @-@ sixths of the island ; and Northern Ireland , a constituent country ( and an unconfirmed " practical " exclave ) of the United Kingdom , with jurisdiction over the remaining sixth . Located west of the island of Great Britain , it is located at approximately 53 ° N 8 ° W. It has a total area of 84 @,@ 421 km2 ( 32 @,@ 595 sq mi ) . It is separated from Great Britain by the Irish Sea and from mainland Europe by the Celtic Sea . Ireland and Great Britain , together with nearby islands , are known collectively as the British Isles ; as the term British Isles is controversial in relation to Ireland , the alternative term Britain and Ireland is increasingly preferred .

# = = Geological development = =

The geology of Ireland is diverse . Different regions contain rocks belonging to different geologic periods , dating as far back almost 2 billion years . The oldest known Irish rock is about 1 @.@ 7 billion years old and is found on Inishtrahull Island off the north coast of County Donegal and also at Annagh Head on the Mullet Peninsula . The newer formations are the drumlins and glacial valleys as a result of the last ice age , and the sinkholes and cave formations in the limestone regions of Clare

Ireland 's geographic history covers everything from volcanoes and tropical seas to the ice age . Ireland has been in formed by two distinct parts and slowly joined together , uniting about 440 million years ago . As a result of tectonics and changes in latitude the sea level has risen and fallen . In every area of the country the rocks which formed can be seen as a result . Finally the impact of the glaciers created the views that we see today . This variation in the two areas along with the differences between volcanic areas and shallow seas gives Ireland a range of soils as well . There are wide bogs and free draining brown earths . The mountains are granite , sandstone , limestone with karst like areas and basalt formations .

= = Physical geography = =

### = = = Mountain ranges = = =

Ireland consists of a mostly flat low @-@ lying area in the midlands , ringed by mountain ranges such as ( beginning in County Kerry and working counter @-@ clockwise ) the Macgillycuddy 's Reeks , Comeragh Mountains , Blackstairs Mountains , Wicklow Mountains , the Mournes , Glens of Antrim , Sperrin Mountains , Bluestack Mountains , Derryveagh Mountains , Ox Mountains , Nephinbeg Mountains and the Twelve Bens / Maumturks group . Some mountain ranges are further inland in the south of Ireland , such as the Galtee Mountains ( the highest inland range ) , Silvermine and Slieve Bloom Mountains . The highest peak is Carrauntoohil , 1 @,@ 038 m ( 3 @,@ 405 ft ) high , is in the Macgillycuddy 's Reeks , a range of glacier @-@ carved sandstone mountains . The mountains are not high ? only three peaks are over 1 @,@ 000 m ( 3 @,@ 281 ft ) and another 457 exceed 500 m ( 1 @,@ 640 ft ) .

The main river in Ireland is the River Shannon , 360 @.@ 5 km ( 224 @.@ 0 mi ) , the longest river in Ireland as well as both the islands of Ireland and Britain , it is a river that separates the boggy midlands of Ireland from the west of the island . The river develops into three lakes along its course , Lough Allen , Lough Ree , and Lough Derg . Of these , Lough Derg is the largest . The River Shannon enters the Atlantic Ocean after Limerick city at the Shannon Estuary . Other major rivers include the River Liffey , River Lee , River Blackwater , River Nore , River Suir , River Barrow , River Bann , River Foyle , River Erne , and River Boyne ( see the list of rivers in Ireland ) .

Lough Neagh, in Ulster, is the largest lake in Ireland and the UK. Legend has it that a giant, Fionn mac Cumhail, was fighting with another in Scotland, and enraged, scooped out a lump of earth, which he threw. It fell into the Irish Sea, creating the Isle of Man, while the hole filled up with water to become Lough Neagh. Other large lakes include Lough Erne and Lough Corrib.

#### = = = Inlets = =

Beginning with County Donegal , Lough Swilly separates one side of the Inishowen peninsula . Lough Foyle on the other side , is one of Ireland 's larger inlets , situated between County Donegal and County Londonderry . Further round the coast is Belfast Lough , between County Antrim and County Down . Also in County Down is Strangford Lough , actually an inlet partially separating the Ards peninsula from the mainland . Further down the coast , Carlingford Lough is situated between Down and County Louth .

Dublin Bay is the next sizeable inlet, while the eastern coast of Ireland is mostly uniform until Wexford Harbour at the mouth of the River Slaney. On the southern coast, Waterford Harbour is situated at the mouth of the River Suir ( into which the other two of the Three Sisters ( River Nore and River Barrow ) flow ). The next major inlet is Cork Harbour, at the mouth of the River Lee, in which Great Island is situated.

Dunmanus Bay , Bantry Bay , Kenmare estuary and Dingle Bay are all inlets between the peninsulas of County Kerry . North of these is the Shannon Estuary . Between north County Clare and County Galway is Galway Bay . Clew Bay is located on the coast of County Mayo , south of Achill Island , while Broadhaven Bay , Blacksod Bay and Sruth Fada Conn bays are situated in northwest Connacht , in North Mayo . Killala Bay is on the northeast coast of Mayo . Donegal Bay is a major inlet between County Donegal and County Sligo .

#### = = = Headlands = = =

Malin Head is the most northerly point in Ireland , while Mizen Head is one of the most southern points , hence the term " Malin head to Mizen head " ( or the reverse ) is used for anything applying to the island of Ireland as a whole . Carnsore Point is another extreme point of Ireland , being the southeastern most point of Ireland . Further along the coast is Hook Head while the Old Head of Kinsale in is one of many headlands along the south coast of Ireland .

Loop Head is the headland at which County Clare comes to a point on the west coast of Ireland , with the Atlantic on the north , and further inland on the south , the Shannon estuary . Hag 's Head is another headland further up Clare 's north / western coastline , with the Cliffs of Moher along the coastline north of the point .

Erris Head is the northwesternmost point of Connacht.

### = = = Islands and peninsulas = = =

Achill Island, in the northwest, is the largest island off Ireland 's coast. The island is inhabited, and is connected to the mainland by a bridge. Some of the next largest islands are the Aran Islands, off the coast of southern Connacht, host to an Irish @-@ speaking community, or Gaeltacht. Valentia Island off the Iveragh peninsula is also one of Ireland 's larger islands, and is relatively

settled, as well as being connected by a bridge at its southeastern end. Omey Island, off the coast of Connemara is a tidal island.

Some of the best @-@ known peninsulas in Ireland are in County Kerry; the Dingle peninsula, the aforementioned Iveragh peninsula and the Beara peninsula. The Ards peninsula is one of the larger peninsulas outside Kerry. The Inishowen peninsula in County Donegal includes Ireland 's most northerly point, Malin Head and several important towns including Buncrana on Lough Swilly, Carndonagh and Moville on Lough Foyle. Ireland 's most northerly land feature is Inishtrahull island, off Malin Head. Rockall Island may deserve this honour but its status is disputed, being claimed by the United Kingdom, Republic of Ireland, Denmark (for the Faroe Islands) and Iceland. The most southerly point is the Fastnet Rock.

### = = Climate = =

The climate of Ireland is mild , moist and changeable with abundant rainfall and a lack of temperature extremes . Ireland 's climate is defined as a temperate oceanic climate , or Cfb on the Köppen climate classification system , a classification it shares with most of northwest Europe . The country receives generally warm summers and mild winters . It is considerably warmer than other areas on its latitude , because it lies in the northeastern Atlantic Ocean , and as a result is warmed by the North Atlantic Current all year .

The influence of the North Atlantic Current also ensures the coastline of Ireland remains ice @-@ free throughout the winter? unlike for example the Sea of Okhotsk and the Labrador Sea which are at a similar latitude. The climate in Ireland does not experience extreme weather, with tornadoes and similar weather features being rare.

The prevailing wind blows from the southwest, breaking on the high mountains of the west coast. Rainfall is therefore a particularly prominent part of western Irish life, with Valentia Island, off the west coast of County Kerry, getting almost twice as much annual rainfall as Dublin on the east (1 @,@ 400 mm or 55 @.@ 1 in vs. 762 mm or 30 @.@ 0 in).

January and February are the coldest months of the year , and mean daily air temperatures fall between 4 and 7  $^{\circ}$  C ( 39 @.@ 2 and 44 @.@ 6  $^{\circ}$  F ) during these months . July and August are the warmest , with mean daily temperatures of 14 to 16  $^{\circ}$  C ( 57 @.@ 2 to 60 @.@ 8  $^{\circ}$  F ) , whilst mean daily maximums in July and August vary from 17 to 18  $^{\circ}$  C ( 62 @.@ 6 to 64 @.@ 4  $^{\circ}$  F ) near the coast , to 19 to 20  $^{\circ}$  C ( 66 @.@ 2 to 68 @.@ 0  $^{\circ}$  F ) inland . The sunniest months are May and June , with an average of five to seven hours sunshine per day .

Though extreme weather events in Ireland are comparatively rare when compared with other countries in the European Continent , they do occur . Atlantic depressions , occurring mainly in the months of December , January and February , can occasionally bring winds of up to 160 km / h or 99 mph to Western coastal counties ; while the summer months , and particularly around late July / early August , thunderstorms can develop .

The table shows mean climate figures for the Dublin Airport weather station over a thirty @-@ year period. Climate statistics based on the counties of Northern Ireland vary slightly but are not significantly different.

## = = Political and human geography = =

Ireland is divided into four provinces, Connacht, Leinster, Munster and Ulster, and 32 counties. Six of the nine Ulster counties form Northern Ireland and the other 26 form the state, Ireland. The map shows the county boundaries for all 32 counties.

From an administrative viewpoint, 21 of the counties in the republic are units of local government. The other six have more than one local council area, producing a total of 31 county @-@ level authorities. County Tipperary had two ridings, North Tipperary and South Tipperary, originally established in 1838, renamed in 2001 and amalgamated in 2014. The cities of Dublin, Cork and Galway have city councils and are administered separately from the counties bearing those names. The cities of Limerick and Waterford were merged with their respective county councils in 2014 to

form new city and county councils . The remaining part of County Dublin is divided into Dún Laoghaire ? Rathdown , Fingal , and South Dublin .

Electoral areas in Ireland (the state), called constituencies in accordance with Irish law, mostly follow county boundaries. Maintaining links to the county system is a mandatory consideration in the re @-@ organisation of constituency boundaries by a Constituency Commission.

In Northern Ireland , a major re @-@ organisation of local government in 1973 replaced the six traditional counties and two county boroughs (Belfast and Derry) by 26 single @-@ tier districts, which , apart from Fermanagh cross the traditional county boundaries. The six counties and two county @-@ boroughs remain in use for purposes such as Lieutenancy. In November 2005, proposals were announced which would see the number of local authorities reduced to seven. The island 's total population of approximately 6 million people is concentrated on the east coast, particularly in Dublin and Belfast and their surrounding areas.

= = Natural resources = =

= = = Bogs = = = =

Ireland has 12 @,@ 000 km $^2$  ( 4 @,@ 633 miles $^2$ ) of bogland, consisting of two distinct types, blanket bogs and raised bogs. Blanket bogs are the more widespread of the two types. They are essentially a product of human activity aided by the moist Irish climate. Blanket bogs formed on sites where Neolithic farmers cleared trees for farming. As the land so cleared fell into disuse, the soil began to leach and become more acidic, producing a suitable environment for the growth of heather and rushes. The debris from these plants accumulated and a layer of peat formed. One of the largest expanses of Atlantic blanket bog in Ireland is to be found in County Mayo.

Raised bogs are most common in the Shannon basin . They formed when depressions left behind after the ice age filled with water to form lakes . Debris from reeds in these lakes formed a layer at the bottom of the water . This eventually choked the lakes and raised above the surface , forming raised bogs .

Since the 17th century , peat has been cut for fuel for domestic heating and cooking and it is called turf when so used . The process accelerated as commercial exploitation of bogs grew . In the 1940s , machines for cutting turf were introduced and larger @-@ scale exploitation became possible . In the Republic , this became the responsibility of a semi @-@ state company called Bord na Móna . In addition to domestic uses , commercially extracted turf is used in a number of industries , especially electricity generation though peat is being combined with biomass for dual @-@ firing electricity generation .

In recent years , the high level of bog being destroyed by cutting has raised environmental concerns . The problem is particularly acute for raised bogs as they yield a higher @-@ grade fuel than blanket bogs . Plans are now in place in both the Republic and Northern Ireland to conserve most of the remaining raised bogs on the island .

= = = Oil, natural gas and minerals = = =

Offshore exploration for natural gas began in 1970 . The first major discovery was the Kinsale Head gas field in 1971 . Next was the smaller Ballycotton gas field in 1989 , and the Corrib gas field in 1996 . Exploitation of the Corrib project has yet to get off the ground because the controversial proposal to refine the gas onshore , rather than at sea has been met with widespread opposition . Gas from these fields is pumped ashore and used for both domestic and industrial purposes . The Helvick oil field , estimated to contain over 28 million barrels ( 4 @,@ 500 @,@ 000 m3 ) of oil , is a 2000 discovery . Ireland is the largest European producer of zinc with three operating zinc @-@ lead mines at Navan , Galmoy and Lisheen . Other mineral deposits with actual or potential commercial value include gold , silver , gypsum , talc , calcite , dolomite , roofing slate , limestone aggregate , building stone , sand and gravel .

In May 2007 the Department of Communications , Marine and Natural Resources ( now replaced by the Department of Communications , Energy and Natural Resources ) reported that there may be volumes over 130 billion barrels (  $2\ @. @$  1 × 1010 m3 ) of petroleum and 50 trillion cubic feet (  $1\ @. @$  400 km3 ) of natural gas in Irish waters ? worth trillions of Euro , if true . The minimum ' guaranteed ' amount of oil in the Irish Atlantic waters is 10 billion barrels (  $1\ @. @$  6 × 109 m3 ) , worth over ? 450 billion . There are also areas of petroleum and natural gas on shore , for example the Lough Allen basin , with 9 @.@ 4 trillion cubic feet ( 270 km3 ) of gas and 1 @.@ 5 billion barrels ( 240 @,@ 000 @,@ 000 m3 ) of oil , valued at ? 74 @.@ 4 billion . Already some fields are being exploited , such as the Spanish Point field , with 1 @.@ 25 trillion cubic feet ( 35 km3 ) of gas and 206 million barrels (  $32\ @, @$  800 @,@ 000 m3 ) of oil , valued at ? 19 @.@ 6 billion . The Corrib Basin is also quite large , worth anything up to ? 87 billion , while the Dunquin gas field contains 25 trillion cubic feet ( 710 km3 ) of natural gas and 4 @.@ 13 billion barrels ( 657 @,@ 000 @,@ 000 m3 ) of petroleum .

In March 2012 the first commercial oil well was drilled 70 km off the Cork coast by Providence Resources. The Barryroe oil well is yielding 3500 barrels per day, at current oil prices at \$ 120 a barrel Barryroe oil well is worth in excess of ? 2.14bn annually.

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