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Legal and technical issues concerning the determination of the baselines in Ireland

Dr. Ronán Long,¹
Jean Monnet Chair of European Commercial Law,
School of Law,
National University of Ireland Galway,
Ireland.

ronan.j.long@nuigalway.ie

1. Introduction

Ireland is an island coastal State in the European Union with significant marine resources in sea areas under national jurisdiction. Ireland has traditionally relied upon the good offices of the United Kingdom Hydrographic Office and its predecessor the British Admiralty for the provision of navigation charts and the hydrographic survey of the Irish coast. The need to establish a national hydrography service has been raised from time to time in the Irish Parliament over the last four decades.² Indeed, as far back as 1963, the Irish Government committed itself to establishing such a service but subsequently failed to implement this decision because of financial considerations and the pressing commitments of the Irish Naval Service to fishery protection. Moreover, there was little understanding at a national level of the importance of updating nautical charts and maritime publications for the safety of navigation.³ Thus it is unsurprising that many of the charts of the Irish coast that are still in use today are based on surveys carried out by the Royal Navy in the 18th and 19th centuries including a comprehensive survey of Dublin Bay by Captain William Bligh in 1800, some 10 years after the mutiny on his ship *Bounty* and his epic voyage in an open boat across the Pacific.⁴

¹Contact details: (Tel) +35391493875; (Fax) +35391750506. Elements of this paper are published previously by the author in his monograph *Marine Resource Law* (Dublin, Thomson Round Hall, 2007). Copies may be ordered at www.roundhall.thomson.com. Should you wish to cite this paper please refer to the relevant chapters in *Marine Resource Law*.

²Between 1963 and 2008, the subject of establishing a national hydrography service was raised on fourteen separate occasions in the Irish Parliament.

³See Dáil Eireann (Irish Parliamentary Question), Vol. 325, 17 December 1980.

⁴In Dublin, he also advised on the placement of quay walls to facilitate the scouring of the channel by the ebb tide and his detailed report on this matter is still held by the Dublin Port and Docks Board.

After Irish independence in 1922, the Royal Navy continued to survey the Irish coast and the accuracy of navigation charts was occasionally subject to judicial scrutiny in a number of high profile court cases concerning law enforcement at sea.⁵ Little progress was made however on the establishment of a national hydrographic office prior to Ireland's accession to the Convention on the International Hydrographic Organisation in 2007. This Convention provides a solid legal basis for intergovernmental cooperation in hydrography and has the ultimate aim of making navigation easier and safer by improving nautical charts and documents. Similarly, considerable impetus has come from Regulation 9, Chapter V of the IMO Safety of Life at Sea (SOLAS) Convention which requires Contracting Parties to maintain Hydrographic Services. In Ireland, a major offshore seabed survey was undertaken in the 1990s and more recently there has been considerable progress in mapping coastal waters.⁶ Importantly, the first steps have also been taken in establishing a national hydrographic service under the auspices of the Department of Transport with a view to improving the accuracy of nautical charts of the Irish coast.

The establishment of a national hydrographic service also presents an opportunity to address a number of lacunae in Irish legislation concerning maritime limits and the baselines in particular. Surprisingly, Ireland was one of the first coastal States after the *Anglo-Norwegian Fisheries Case* to enact detailed primary legislation which provides for the use of different types of baseline on the Irish coast.⁷ This legislation has remained on the statute book since 1959 and has been subject to both academic comment and judicial scrutiny.⁸ The baseline legislation and navigation charts are

⁵*The People (DPP) v Egbertus Marius Van Onzen and Frank Catharina Loopmans* [1996] 2 I.L.R.M. 387; *The People (DPP) v Martin Ferris, John Crawley and Michael Brown*, CCA, 15 December 1986 [1986] 3 Frewen 11

⁶ See R. Long, *Marine Resource Law*, *op.cit.* n.1, pp.57-60.

⁷ Maritime Jurisdiction Act 1959, No. 22 of 1959. *Fisheries Case (United Kingdom v Norway)*[1951] I.C.J. Rep. 116 (p.116, 128, 129, as corrected by *Erratum* of October 22, 1956).

⁸ For academic comment see *inter alia*: R. Long, *Marine Resource Law op.cit.* n.1, pp. 121-130; C. Symmons, *Ireland and the Law of the Sea* (2nd ed., Round Hall Sweet & Maxwell, 2000), p.40; C.R. Symmons, "Ireland and the Law of the Sea" in *The Law of the Sea: The European Union and its Member States* (T. Treves ed., Martinus Nijhoff Publishers, The Hague/Boston/London, 1997), p. 267; J. Edwards and M. Mellett, "Ireland's Maritime Boundaries and the Prosecution of Offences Committed within the Territorial Seas of the State" (1999) *University of Limerick Law Review* 91; C. Symmons, "The Background to the imposition of the straight baseline system around the Irish coast: An interesting episode in Anglo-Irish legal relations" (1998) 13 *International Journal of Marine and Coastal Law* 47; V. Prescott, *The Political Geography of the Oceans* (Newton Abbot, 1975), p.69; V. Prescott, C. Schofield *Maritime Political Boundaries of the World* (2nd ed., Boston, Leiden, Martinus

clearly relevant to law enforcement at sea including important cases addressing matters such as the illegal importation of narcotics into the State,⁹ the illegal possession of arms and ammunition on board a fishing vessel in the territorial sea,¹⁰ the refusal of access to a port of refuge in Ireland to a vessel in distress,¹¹ as well as the loss of Air India Flight 172 and 384 passengers and crew off the south coast of Ireland in 1985.

Against this background, this paper reviews Ireland's baseline legislation and suggests a number of reforms with a view to bringing it into line with international best practice by maximising the various rules for determining the baselines set down by the 1982 United Nations Convention on the Law of the Sea. Consideration is also given to a number of legal and technical issues that may arise in the prosecution of criminal offences in sea areas under Irish jurisdiction. Brief mention is made of the relevance of the baselines to the implementation of European common fisheries policy and legal instruments such as the Water Framework Directive and the Marine Strategy Framework Directive.

At the outset it is important to recall that the baseline is the line from which the seaward limits of the territorial sea and certain other maritime jurisdictional limits are measured. Indeed, with the notable exception of the outer continental shelf limits, all maritime limits are measured from the baseline.¹² The baseline is also the dividing line between internal waters and the territorial sea. The principal legal instruments governing the baselines in Ireland are the Sea-Fisheries and Maritime Jurisdiction Act 2006 (here after referred to as the 2006 Act), the Maritime Jurisdiction Act (Charts) Order 1959, and the Maritime Jurisdiction Act 1959 (Straight Baseline) Order 1959.¹³ Broadly speaking, these instruments follow the general scheme of international law

Nijhoff, 2004); United States Department of State (Bureau of Intelligence and Research) "Straight Baselines: Ireland" Limits in the Seas, International Boundary Study, Series A, No.3 (The Geographer, Jan. 23rd, 1970); P. O'Higgins, "Note on the Maritime Jurisdiction Act 1959" (1960) 9 I.C.L.Q 325. Also forthcoming, On the case law see *op. cit.* n.4.

⁹ *The People (DPP) v Egbertus Marius Van Onzen and Frank Catharina Loopmans* [1996] 2 I.L.R.M. 387;

¹⁰ *The People (DPP) v Martin Ferris, John Crawley and Michael Brown*, CCA, 15 December 1986 [1986] 3 Frewen 11

¹¹ *ACT Shipping (Pte) Ltd v Minister for the Marine and Others* [1995] 3 IR 407.

¹² The baseline is significant in determining the limits of the outer continental shelf limits which cannot exceed either 350 miles from the baselines or 100 miles from the 2,500 metre isobath.

¹³ Into force, January 1, 1960.

regarding the determination of the baseline.¹⁴ Essentially, they provide for *normal* baselines which follow the low-water line along the coast and *straight* baselines which may be used on coasts which have specific geographical features.¹⁵ Both types of baselines are used in various parts of the Irish coast and are reviewed in my book on *Marine Resource Law* where I make the following observations on pages 121 through to 130.¹⁶

2. “Normal baseline: the low-water mark

The 2006 Act, in the absence of express legislative provision to the contrary, establishes the *low-water mark* as the baseline on the coast of the mainland or of any island, or on any low-tide elevation situated wholly or partly at a distance not exceeding 12 miles from the mainland or an island.¹⁷ Although the 2006 Act refers to the low-water mark (a term not used in international law) this for practical purposes is the low-water line as shown on navigation charts. Under the 1982 LOS Convention, this baseline is generally referred to as the *normal baseline*.¹⁸ Around the Irish coast, as can be seen from Map 1, the low-water mark is the baseline on all of the east-coast from Carnsore Point in Co. Wexford as far as Carlingford Lough in Co. Louth. The low-water mark is also the baseline on several different locations on the west and north coasts including: the north-coast of Donegal; the north-coast of Mayo; the Aran Islands; the west coast of Clare; the north-coast of the Dingle peninsula.

¹⁴ Arts 5–11, 13 and 14 of the 1982 LOS Convention contain the rules for drawing baselines when associated with associated coastal features such as reefs, coastlines which are deeply indented, deltas, mouths of rivers, bays, ports, as well as low-tide elevations. Art.5 of the 1982 LOS convention is modelled on Art.3 of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone. For a particular useful guide on the drawing of baselines see *Baselines: An examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (Office for Ocean Affairs and Law of the Sea, United Nations, 1989).

¹⁵ ss.82, 83, 84(2), 86, 87(2) and 88 of the Sea-Fisheries and Maritime Jurisdiction Act 2006.

¹⁶ R. Long, *Marine Resource Law op.cit.* n.1.

¹⁷ s.85(1) of the Sea-Fisheries and Maritime Jurisdiction Act 2006. For commentary on a similar provision in the Maritime Jurisdiction Act 1959 (repealed by the 2006 Act), see C.R. Symmons, “Ireland and the Law of the Sea” in *The Law of the Sea: The European Union and its Member States* (T. Treves ed., Martinus Nijhoff Publishers, The Hague/Boston/London, 1997), p. 267.

¹⁸ Art.5 of the 1982 LOS Convention.

3. Determining the low-water line

A key element in determining the baseline is identifying what constitutes the low-water mark. This is not a straight forward exercise as there are different low-water marks during the course of different tidal cycles and as a result of variation in the gravitational pull of the moon, earth and sun. From a technical hydrographic perspective, the low-water mark is usually understood to refer to the interface of the plane of low-water with the shore and is indicated on navigation charts by the line depicting the level of chart datum.¹⁹ Chart datum in turn is the level of reference level used on navigation charts - depths depicted on navigation charts are measured from below chart datum and drying heights are measured above it. Chart datum is normally close to the lowest tide level. The low-water line, in non-technical terms, is the line along a coast to which the sea recedes at low-water. Although the low-water line is central to determining the normal baseline, not all States use the same low-water line as chart datum on navigation charts²⁰ These may refer, for example to: mean levels (Mean Low Water); mean levels considered jointly with the range of tide (Mean Low Water Springs or Mean Low Water Neaps); to astronomical tides (Lowest Astronomical Tides); or to empirical levels (Lowest Low Water). Many States use mean low-water springs (MLWS) as the datum which is the average height of all recorded low-water spring tides.²¹ In recent years, there is also a trend for States such as the UK to use the lowest astronomical tide (LAT) to determine the low-water line.²² The LAT is the lowest level which can be predicted to occur under average meteorological conditions and under any astronomical conditions in a full metonic tidal cycle of 18.6 years. Accordingly, this level is not reached every year and is by definition lower than MLWS. International practice on this matter is not

¹⁹See International Hydrographic Organization, *A Manual on Technical Aspects of the United Nations Convention on the Law of the Sea – 1982*, Special Publication Number 51, 3rd Edition (IHO, Monaco, 1993), p.19.

²⁰On the history of the low-water mark as the normal baseline and the choice of tidal levels, see D.P. O’Connell, *The International Law of the Sea* (Clarendon Press, Oxford, 1984), Vol.II, pp.171–183.

²¹ The height of mean low-water springs is the average, throughout a year when the average maximum declination of the moon is 23½ degrees, of the heights of two successive low-waters during those periods of 24 hours (approximately once a fortnight) when the range of the tide is greatest. See *UK Admiralty Tide Tables 2003* (United Kingdom Hydrographic Office, Taunton, 2003).

²² See *Baselines: An examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (Office for Ocean Affairs and Law of the Sea, United Nations, 1989).

settled, and many States continue to use (for convenience) the low-water line shown on large-scale navigation charts. This line corresponds to the local level of chart datum.

In places where there is little tidal range, or where the coast is very steep such as near the Cliffs of Mohair in Co. Clare, no area may be visible between the high and low-water lines as depicted on navigation charts. In such instances, the coastline may be taken as the normal baseline as the different low-water marks will have little or no effect on the location of the baseline or the projection of maritime limits. There is however considerable scope for dispute where one finds coasts with a large tidal range and a gentle shelving foreshore such as Dublin Bay. In such cases, when reference is made to low-water in a legal instrument it is essential to know which tidal datum is being used to determine the baseline.²³

Surprisingly, Irish legislation on this important aspect of the baseline lacks clarity because as the 2006 Act (nor its predecessor the Maritime Jurisdiction Act 1959) identify any particular chart datum for this purpose. This omission is of practical relevance for the following reason. As previously mentioned, there are six areas of the Irish coast where the low-water mark is used as the baseline.²⁴ There is also considerable variance on the tidal range on the Irish Coast. The maximum tidal range on the Irish coast is greatest in the Shannon estuary which attains about 5.8 metres at spring tides. On the east coast, the range of the tides increases southwards from Larne and northwards from Wicklow and attains a maximum of about 4.9 metres at spring tides near Dundalk. In contrast, the mean spring tides at Carnsore Point is 1.75 metres.²⁵ The absence of a specific reference to the chart datum in Irish legislation means that in the coastal areas where the low-water mark is used as the baseline it is not possible to be precise regarding the physical location of the

²³ See *inter alia*: M. Antunes, “The importance of the tidal datum in the definition of maritime limits and boundaries” *Maritime Briefing* Vol.2, No.7 (International Boundaries Research Unit, University of Durham, UK, 2000). More recently see, V. Prescott and C. Schofield, *The Maritime Political Boundaries of the World* (2nd ed., Martinus Nijhoff, Leiden / Boston, 2005), pp.94–97.

²⁴ See para.3–19.

²⁵ For accurate tidal information, see *Admiralty Tidal Tables* which is updated annually and published by the United Kingdom Hydrographic Office.

baseline. Indeed a strict construction of s.85(1) of the 2006 Act suggests the physical location of the baseline will vary with the tidal range and the vertical gradient of the foreshore. A gentle sloping shore with a large tidal range may result in the charted low-water line lying several hundred meters landward of the actual low-water line. As noted in one study of this subject:

“As the baseline is directly referable to low-water mark and as the outer limit of the territorial seas is in turn directly referable to the baseline, it is as things stand, impossible to plot Ireland’s maritime boundaries with precision. The possible implications of this for a criminal case in which the perpetrator is apprehended “just within” the outer limit of the territorial seas are immediately apparent”.²⁶

Despite the omission of any reference to chart datum in the 2006 Act, s.92(1) does however empower the Government to: “prescribe charts which may be used for the purpose of establishing the low-water mark, or the existence of any low-tide elevation...” The Maritime Jurisdiction Act (Charts) Order 1959 provides that Charts published by the Admiralty in London may be used for this purpose.²⁷ If s.92(1) of the Maritime Jurisdiction Act 2006, is read in conjunction with the Maritime Jurisdiction Act (Charts) Order 1959, it is implicit that mean-low water springs is the datum for identifying the low-water line on the Irish coast on the grounds that this was the datum used by the UK Hydrographic Office (UKHO) to survey the coast and is the datum used to depict the low-water line on the relevant Admiralty charts of the Irish coast.²⁸ However, considerable care needs to be exercised in relation to this issue as the UKHO has switched in recent years to using the lowest astronomical tide (LAT) as the chart datum on charts of the coast of the UK. This may lead to a different datum being used for charts of the sea area adjacent to the coast of Northern Ireland from the ones that are used in the Republic of Ireland.

²⁶ See J. Edwards and M. Mellett, “Ireland’s Maritime Boundaries and the Prosecution of Offences Committed within the Territorial Seas of the State” (1999) *University of Limerick Law Review* 91.

²⁷ S.I. No.174 of 1959.

²⁸ On the use of Admiralty charts in evidence see: *The People (DPP) v Egbertus Marius Van Onzen and Frank Catharina Loopmans* [1996] 2 I.L.R.M. 387; *The People (DPP) v Martin Ferris, John Crawley and Michael Brown*, CCA, 15 December 1986 [1986] 3 Frewen 11. See also C. Symmons, *Ireland and the Law of the Sea* (2nd ed., Round Hall Sweet & Maxwell, 2000), p.40.

Particular care should also be exercised with aerial photographs, satellite images and land ordnance survey maps as these may not prove to be reliable for defining a specific low-water line.

Given the importance of the baseline in determining the maritime extent of the State and with a view to removing the potential for dispute, future reform of the legislation ought to address technical matters such as the tidal datum for the determination of the normal baseline.

4. Straight baselines

The use of the low-water mark (described above) as the baseline often leads to a number of practical difficulties on coasts that are deeply indented by bays or where there are coastal features such as islands as these have the potential to project irregular outer limits of maritime zones. Norway was the first State to surmount this difficulty by utilising a system of straight baselines to connect a number of terminal points (sometimes referred to as basepoints) on the coastline which is characterised by fjords, islands and low-tide elevations.²⁹ This method of baseline delineation subsequently received the imprimatur of the International Court of Justice in the *Anglo-Norwegian Fisheries Case*.³⁰ Subsequently, the decision of the Court on this subject was codified in both the 1958 Convention on the Territorial Sea and Contiguous Zone, as well as the 1982 LOS Convention.³¹ The latter provides that straight baselines may only be applied in certain exceptional circumstances in localities where *the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity*.³² In the absence of objective standards, there is considerable divergence of expert opinion regarding what constitutes “a deeply indented coast” or a “fringe of islands along the coast in its

²⁹ On low-tide elevations see *Marine Resource Law* paras 3–30 to 3–34.

³⁰ *Fisheries Case (United Kingdom v Norway)*[1951] I.C.J. Rep. 116 (p.116, 128, 129, as corrected by *Erratum* of October 22, 1956).

³¹ Art.4 of the Convention on the Territorial Sea and the Contiguous Zone; Art.7 of the 1982 LOS Convention.

³² Art.7(1) of the 1982 LOS Convention.

immediate vicinity”.³³ However, guidance on this matter is provided by the 1982 LOS Convention which set down a number of pre-requisite conditions for the drawing of straight baselines.³⁴ In short, these require that straight baselines must not depart to any appreciable extent from the general direction of the coast and the sea areas lying within the lines must be sufficiently closely linked to the land domain to be subject to the law that applies in internal waters. Low-tide elevations may not be used as terminal points for the baseline unless they are clearly marked by a lighthouse or other installation. The economic interests of the region concerned, the reality and the importance of which are clearly evidence by long usage, may also be taken into account in the construction of straight baselines. For obvious reasons, straight baselines may not be used to cut off the territorial sea of another State from the high seas or an EEZ. There is no constraint on the maximum length of a straight baseline provided that there is compliance with the other conditions enumerated in the 1982 LOS Convention concerning the drawing of straight baselines joining appropriate points on the coast.³⁵ Despite the relatively clarity of these rules, several authoritative studies on this subject have pointed out that State practice around the world has varied enormously and several coastal States have paid scant attention to the methods of straight baseline construction specified in both the 1982 LOS Convention and the 1958 Convention on the Territorial Sea and Contiguous Zone.³⁶

Many parts of the Irish coastline meet the exceptional geographical circumstances and as noted previously following the decision of the International Court of Justice in the *Anglo-Norwegian Fisheries Case*, Ireland was one of the first countries to adopt legislation governing the utilisation of straight baselines.³⁷ More specifically, s.4(2) of the Maritime Jurisdiction Act

³³ The absence of an objective standard has been noted by the United Nations Group of Experts see, *Baselines: An examination of the Relevant Provisions of the United Nations Convention on the Law of the Sea* (Office for Ocean Affairs and Law of the Sea, United Nations, 1989), pp.17–20.

³⁴ Arts 7(3)–(6) of the 1982 LOS Convention.

³⁵ For a discussion with respect to the maximum length of straight baselines see, United States Department of State (Office of Oceans Law and Policy), “Developing Standard Guidelines for Evaluating Straight Baselines” Limits in the Seas No. 106 (United States Department of State, Office of Oceans Law and Policy, 1987)p.31.

³⁶ In particular see, A. Roach and R. Smith, *United States Responses to Excessive Maritime Claims* (2nd ed., Kluwer Law International, The Hague, 1996), pp.60–146.

³⁷ See 176 *Dáil Debates* Cols 1052–1053.

1959 empowered the Government to prescribe by order straight baselines in relation to any part of the national territory and the closing line of any bay or mouth of a river. The Government utilised this power when issuing the Maritime Jurisdiction Act 1959 (Straight Baseline) Order on October 20, 1959.³⁸ This Order provides for the drawing of 44 straight baselines linking 50 basepoints on the coast as set out in the schedule.³⁹ A map showing the prescribed straight baselines is annexed to the 1959 Order and reproduced in Figure 1 below. The 2006 Act repeals and restates the provisions in the 1959 Act concerning straight baselines.⁴⁰ At the time of writing, the 1959 Straight Baseline Order remains in force.

The Irish straight baselines have been subject to extensive review elsewhere and the discussion here is limited to a number of observations.⁴¹ The first observation is that Ireland has applied the baselines utilising the different methods of construction provided for by international law to suit the different geographical configurations of the Irish coast. A study undertaken by the United States Geographer in 1970 notes that there are 50 basepoints specified in the 1959 Order. Closer examination reveals that 21 of these are located on headlands of the mainland; an equal number on islands or islets; and the remaining 8 points are on rocks.⁴² No low-tide elevations or drying rocks are used and 11 straight baselines begin and terminate on the mainland of Ireland with a single exception, Point No. 20 which is on South Island of the Aran Islands.⁴³ The next point, No. 21 comprises the southeast corner of adjacent Inishmore Island and because of geographic configuration and the lack of gain in the sea, a line has not been drawn to connect these two points. In effect, as the United States Geographer Study points out, this means that the continuous

³⁸ Into force, January 1, 1960.

³⁹ Maritime Jurisdiction Act 1959 (Straight Baseline) Order 1959 (S.I. No.173 of 1959).

⁴⁰ s.85(2) and (3) of the Sea-Fisheries and Maritime Jurisdiction Act 2006.

⁴¹ See *inter alia*: P. O'Higgins, "Note on the Maritime Jurisdiction Act 1959" (1960) 9 I.C.L.Q 325; C. Symmons, "The Background to the imposition of the straight baseline system around the Irish coast: An interesting episode in Anglo-Irish legal relations" (1998) 13 *International Journal of Marine and Coastal Law* 47; V. Prescott, *The Political Geography of the Oceans* (Newton Abbot, 1975), p.69.

⁴² See, United States Department of State (Bureau of Intelligence and Research) "Straight Baselines: Ireland" Limits in the Seas, International Boundary Study, Series A, No.3 (The Geographer, Jan. 23rd, 1970). This study does not represent acceptance by the United States of the straight baselines.

⁴³ *ibid.*

baseline is drawn so as to enclose Galway Bay within Irish internal waters.⁴⁴ The low-water line of Inishmore effectively joins the points. Elsewhere there are six different sections of coast there are straight baselines which alternate with seven normal baselines utilising the low-water line of the mainland or of adjacent islands.⁴⁵ The straight baselines run from Scart Rock in Malin Head in anti-clockwise direction as far as Carnsore Point in Co. Wexford. In the west and south, they have replaced the low-water line (ie. the normal baseline) for more than 90 per cent of this part of the coast. Only two of the 44 straight baseline segments exceed 24 miles; the one between points 42 and 43 and second between 46 and 47.⁴⁶ The average length of the 44 segments is slightly more than 10.75 miles.⁴⁷ This may be contrasted with State practice elsewhere there is a tendency to use longer lines which in some instances are inconsistent with the 1982 LOS Convention.⁴⁸

Unlike Norway, the Irish straight baselines have not, in every instance, been constructed from the points farthest from the shore and do not extend to a number of islands, notably Inishtrahull, Tory Island, Rathlin O'Beirne, the Stags of Broadhaven, Fastnet Rock, or Coningmore Rock off County Wexford. One study alleges that the root of this omission was pressure from the British government who were opposed to the extension of the Irish territorial sea at the time the Maritime Jurisdiction Act 1959 (Straight Baseline) Order was made by the Irish government.⁴⁹ However, it should also be borne in mind that in 1959, international law only provided for a three mile territorial sea and consequently all islands and rocks which were seaward of the this limit were not used in the construction of the straight baselines. Unusually and perhaps misleadingly, the map attached to the 1959 Straight Baseline Order omits to show any of the islands that lie on the seaward side of

⁴⁴ *ibid.*

⁴⁵ *ibid.* On the low-water mark/line, see *infra*.

⁴⁶ *ibid.*

⁴⁷ *ibid.*

⁴⁸ See for example, the straight baselines drawn by the UK around the Falkland Islands which have been described as a "pregnant rectangle" and the lines enclosing Spain's Balearic islands. On these lines and other international State practice see, W. Reisman, and G. Westerman, *Straight Baselines in International Maritime Boundary Delimitation* (Macmillan, London, 1992).

⁴⁹ See, Review of Common Fisheries Policy: report of Advisory Group. Ireland. Dept. of the Marine. Advisory Group on the Review of the Common Fisheries Policy, July 1991, p.131.

the baseline such as Tory Island or the Fastnet Rock. In 1976, an unreported Irish High Court decision held that Tory Island could generate a 12 mile limit in its own right.⁵⁰ Accordingly, the baseline on these islands is the low-water mark and not the straight baseline linking the various geographical features on the mainland.⁵¹ The 1982 LOS Convention now provides for the use of islands and low-tide elevations with lighthouses or similar installations in drawing of straight baselines provided they conform to the abovementioned conditions.⁵² This is a matter for consideration in any future reform of baselines as set out in the 1959 Order.

Ireland's straight baseline legislation was considered innovative in 1959 and at the threshold of what was then permissible under international law. In the intervening years it has become evident that there are a number of difficulties regarding the technical application of the legislation. In particular, as seen above, the failure of Irish legislation to specify a chart datum may undermine criminal proceedings relating to offences committed at sea.⁵³ There are also a number of geographical gaps in the straight baselines (such as the one pointed out above in the Aran Islands between points 20 and 21) and a number of points that are clearly located out to sea when they are plotted on the relevant large-scale navigation chart.⁵⁴ These deficiencies suggest that due consideration needs to be given to the revision of the baseline legislation.⁵⁵

⁵⁰See, C. Symonns, *The Maritime Zones of Islands in International Law* (Martinus, Nijhoff Publishers, Hague/Boston/Leiden, 1979), pp.102–103.

⁵¹ s.85(1)(a) of the Sea-fisheries and Maritime Jurisdiction Act 2006.

⁵² Art.7(4) of the 1982 LOS Convention.

⁵³ The difficulties associated with using different chart datums for projecting the baselines are examined by J. Edwards, M. Mellett, *loc. cit.*, n.77. Essentially, different chart datums may give rise to inaccuracies of up to several hundred metres when plotting the basepoints (terminal points) of the straight baselines. Some charts of Irish waters are constructed with reference to the Ordnance Survey of Great Britain datum of 1936. There are others constructed with reference to the Ordnance Survey of Ireland Datum of 1965, and the shifted Datum of 1975. The Maritime Jurisdiction Act 1959 (Exclusive Fishery Limits) Order 1976 (S.I. No.320 of 1976), specifies the European Datum 1950. In addition some Admiralty charts are now being produced with reference to WGS 84 which has been adopted by many nations as the standard geodetic reference system for future navigation. There conclusion are supported by a technical study of the basepoint used to mark. See, G. Delaney, "The Currency of Charts of Irish Waters with specific Reference to Horizontal Datums and Sounding Data" (Unpublished LLM thesis, University of Nottingham, 1997).

⁵⁴ For a legal and scientific assessment of the straight baselines, see R. Long, C. Symmons, A.M. O'Hagan, *et al.*, *Ireland's Maritime Limits* (forthcoming).

⁵⁵ On this point see J. Edwards, M. Mellett, *loc. cit.*, n.77.

5. Conformity with international law

Another aspect of Ireland's straight baselines which calls for comment is their conformity with international law. This is not helped by the ambiguous enabling provisions in the 2006 Act which allows the Government to prescribe straight baselines in relation to "any part of the national territory *and* the closing line of any bay or mouth of a river, and any line so prescribed shall be taken as the baseline".⁵⁶ This reiterates similar wording in the 1959 Act (since repealed) and it is not clear whether the *and* in this provision is conjunctive or disjunctive.⁵⁷ Consequently, it could be argued that the Act does not distinguish the straight baseline regime from the other rules that apply in international law to geographical features such as bays and rivers.⁵⁸ Expert opinion is also divided on whether all the Irish straight baseline segments are in full compliance with international law.⁵⁹ In particular, some experts have questioned whether the coastal configuration east of the Old Head of Kinsale is sufficiently *deeply indented and cut into* so as to satisfy international legal requirements for the establishment of a system of straight baselines. Practice in other countries, on the other hand, indicates that the application of the straight baseline regime by Ireland is relatively modest and measured.⁶⁰ Furthermore, it may be argued that there is sufficient and consistent State practice to uphold the view that other States have acquiesced to the Irish straight baselines on the south-coast. This is particularly the case in relation to Germany, the UK, France, Belgium and France who all have all availed of historic fishing rights (discussed below) in the 6–12 mile band of the territorial

⁵⁶ Emphasis added. S.5(2) of the Sea-Fisheries and Maritime Jurisdiction Act 2006.

⁵⁷ s.4(2) of the Maritime Jurisdiction Act 1959.

⁵⁸ The 1982 LOS Convention has different provisions which are applicable to different geographical features such as: bays (Art.10); river mouths and estuaries (Art.9); ports (Art.11); and roadsteads (Art.12).

⁵⁹ See *inter alia*: C. Symmons, *op.cit.*, n.80 at pp.58–61; V. Prescott, "Straight Baselines: Theory and Practice" in *The U.N. Convention on the Law of the Sea* (Proceedings of the Law of the Sea Institute Nineteenth Annual Conference, E.D. Brown and R.R. Churchill ed., William S. Richardson School of Law, University of Hawaii, Honolulu, 1987) at p.292; and by the same author, *The Political Geography of the Oceans* (Newtown Abbot, 1975), p.69.

⁶⁰ For a comprehensive review of state practice see A. Roach and R. Smith, *United States Responses to Excessive Maritime Claims* (2nd ed., Kluwer Law International, The Hague, 1996), pp.60–146.

sea as projected from those baselines.⁶¹ Moreover, when the matter is raised in the Irish parliament (the Dáil) from time to time, the government has expressed a reluctance to redraw the current lines as set down by the 1959 Order. As far back as 1959, the Minister for Foreign Affairs, Mr. Aiken, is on record as saying that the Ireland was willing to defend the baselines in the International Court if necessary.⁶² In 1964, the government noted that France had withdrawn her reservation regarding the Irish straight baselines as part of the compromise deal resulting from the conclusion of the 1964 Fisheries Convention.⁶³ In the 1980s, the government expressed the view that international law did not permit any future expansion of the straight baselines.⁶⁴ Instructively, the acquiescence of the UK to the Irish straight baselines may be contrasted with their protest against Italian straight baselines in the Gulf of Taranto and the Libyan straight baseline in the Gulf of Sirte.⁶⁵

Few coastal States, with the notable exception of Germany and Guinea, have retracted excessive straight baselines claims in recent years.⁶⁶ In the case of Ireland, redrawing the straight baselines will not result in any major adjustment of fishery limits. An Irish government study has concluded that the straight baselines have negligible effect on the projection of the exclusive fishery limits as these are limits are determined by a number of basepoints which are firmly fixed on land or offshore islands and rocks.⁶⁷ Furthermore, as a result of the European Court of Justice decision in the *UK Baseline Case* (discussed below), any readjustment of the baselines will not have any bearing

⁶¹ On fishing rights in the 6–12 mile zone see *Marine Resource Law* paras.3–57 to 3–59. The link between fisheries and the coast was a factor taken into consideration in the *Anglo-Norwegian Fisheries* case: *Fisheries Cases (United Kingdom v Norway)* [1951] I.C.J. Rep. 132.

⁶² See 176 *Dáil Debates* Col.1557.

⁶³ See reply by Mr. Atkin to parliamentary question on Irish territorial waters, 208 *Dáil Debates* Col.1179.

⁶⁴ See, written answers by Minister for Foreign Affairs to question No.476, 337 *Dáil Debates* JulyCol.2080; and the oral answer by Dr. Fitzgerald to 294 *Dáil Debates* Col.1111.

⁶⁵ On UK protests see A. V. Lowe, “The UK and the Law of the Sea” in *The Law of the Sea, The European Union and its Member States* (T.Treves ed., Martinus Nijhoff, The Hague, Boston, London, 1997), p.523.

⁶⁶ See A. Roach and R. Smith, *United States Responses to Excessive Maritime Claims* (2nd ed., Kluwer Law International, The Hague, 1996)p.146.

⁶⁷ See, study completed by P.F. Croker, Petroleum Affairs Division, Department of Communications Marine and Natural Resources (copy with the author). The points listed are: Stag Rocks; Eagle Island; Blacksod Bay (Rocks to SW of Black Rock); Kilmeen Rocks Inishark; Tearaght Rocks West, Inistearaght; Great Foze Rock; Washerwoman Rock, Great Skellig; Gull Rock, Dursey Island; Calf Rock, Dursey Island; Calf Rock, Dursey Island; Mizen Head; Bream Point, Cape Clear.

on the exercise of fishing rights under the common fishery policy.⁶⁸ However, should the legislation governing straight baselines be subject to future review, consideration may have to be given to the decision of the International Court of Justice which held that the method of straight baseline delineation codified in the 1982 LOS Convention must be applied restrictively and is an exception to the normal rules for the determination of baselines.⁶⁹”

6. Baselines and European legal instruments

When discussing the baselines it is important to keep in mind that they are increasingly used as a means to delimit maritime space for the purpose of implementing European Community legal instruments and common policies such as the common fishery policy, the Water Framework Directive, and the Marine Strategy Directive. In this context, although there has always been a tendency of coastal States to draw their baselines in a generous manner with a view to pushing their maritime zones further seawards, this form of largesse may also entail bringing greater maritime areas within the scope of European Community legal instruments. A number of examples that I mention in *Marine Resource Law* are as follows.

6.1 Common Fisheries Policy

One of the first policies to utilise the baseline as a means to delimit maritime space is the common fisheries policy where Member States of the European Union have retained legal competence to regulate and manage fishery resources in the zone extending to a distance of 6 miles from the baselines and this includes internal waters on the landward side of straight baselines. In certain parts of the European coast, Member States have also retain competence over fishery resources in the 6 to 12 mile zone measured from the baseline subject to limited access for vessels from other Member States which have traditionally fished in those waters and for vessels which set out from local ports. The precise geographical arrangements for access to fishery

⁶⁸ Case C-146/89 *Commission v. United Kingdom* [1991] E.C.R. I-03533.

⁶⁹ *Case concerning the maritime delimitation and territorial questions between Qatar and Bahrain (Qatar v Bahrain)* [2001] I.C.J. Rep. 40 at para. 212.

resources in the 6 to 12 mile zone are set out in Annex I to Council Regulation No 2371/2002 (commonly referred to as the “Basic Fishery Management Regulation”). In these areas coastal Member States have scope to adopt conservation and management measures provided that these accord with the general principles of EC law and the specific rules set down under the common fishery policy. Significantly, the Council of Fishery Ministers will review the future of these zones before 2012 in the context of the next review of the common fishery policy. Certain Member States such as Ireland have advocated extending the coastal fishery zone to 24 miles from the baselines with a view to protecting small scale coastal fisheries activities. Previous suggestions to this effect in 2002 were rejected by the European Commission in their Green Paper on the Future of the Common Fishery Policy.⁷⁰

One practical question which may arise before 2012 is what effect will any future reform of the law or any future adjustment of the baselines have on the exercise of fishing rights under the common fishery policy. In other words, is it possible to project the 6 and 12 mile zones further seawards by a more generous application of the rules governing the baselines. In general, as I have noted previously their use for projecting fishery limits is somewhat curtailed by the judgement of the European Court of Justice in the *UK Baseline Case*.⁷¹ More specifically:

“This case established that the baselines that are relevant to the fishery zones are those which were in place when the Council of Ministers adopted the basic management regulation underpinning the CFP in 1983.⁷² In effect, this decision rules out the international law concept of ambulatory baselines and means that the baselines used for measuring the both the 6 and 12 mile fishery limits will always be those that were in place on January 25, 1983 when Regulation 170/83 was adopted by the European Council of Fishery Ministers.⁷³ One practical outcome of this decision is that the UK has two

⁷⁰ European Commission, *The Future of the Common Fisheries Policy* COM(2001) 135 final, s.5.1.4.2

⁷¹ Case C-146/89 *Commission v. United Kingdom* [1991] E.C.R. I-03533. For case notes see, *inter alia*: R.R. Churchill (1993) 30 *Common Market Law Review* 814 ; B. Brandtner and H-P. Folz (1993) 4 *European Journal of International Law* pp.432-434.

⁷² Council Regulation 170/83 establishing a Community system for the conservation and management of fishery resources [1983] O.J. L24/77.

⁷³ See *Marine Resource Law* paras 3-55 to 3-59.

maritime limits shown on navigation charts; one for fishery management and enforcement and one for all other purposes. “

6.2 *Water Framework Directive*

The Water Framework Directive establishes a new framework for Community action in the field of water policy.⁷⁴ This instrument (was agreed by the European Parliament and Council in September 2000 and came into force on 22nd December 2000. The Directive updates existing water legislations and provides for water management on the basis of River Basin Districts. In general, it aims to:

- protect and enhance the status of aquatic ecosystems (and terrestrial ecosystems and wetlands directly dependent on aquatic ecosystems)
- promote sustainable water use based on long-term protection of available water resources
- provide for sufficient supply of good quality surface water and groundwater as need for sustainable, balanced and equitable water use
- provide for enhanced protection and improvement of the aquatic environment by reducing / phasing out of discharges, emissions and losses of priority substances
- contribute to mitigating the effects of floods and droughts
- protect territorial and marine waters
- establish a register of 'protected areas' e.g. areas designated for protection of habitats or species.⁷⁵

The Directive is a sophisticated legal instrument and exceedingly technical in nature. Suffice to note here that it applies to the management of inland waters, estuarine waters (“transitional waters” in the jargon of the Directive) and coastal waters. The application of the Directive to the marine environment is very much defined in the context of the baselines. For example, Member States must achieve good chemical status of all territorial waters by 2015 and good ecological status for all coastal waters which is defined as meaning “surface water on the landward side of a line, every point

⁷⁴ Directive 2000/60/EC of the European Parliament and of the Council of October 23, 2000 establishing a framework for Community action in the field of water policy [2000] O.J. L327/1. Into force December 22, 2000(Art.25).

⁷⁵ Art 1 of the water Framework Directive. See http://ec.europa.eu/environment/water/water-framework/index_en.html

of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional water.” As I have pointed out previously:

“The use of the baseline as the datum for establishing the geographical limit of the Directive in the coastal environment is to be welcomed as it allows States to fix precisely the zone of application of the Directive. In this regard, accurate baseline legislation is a prerequisite to proper implementation of the Directive in the marine environment. Furthermore, because Ireland utilises a system of straight baseline system on the south and west coast it is obliged to apply the Directive in an extensive number of bays and inlets which might not normally be covered by the Directive if the baseline was determined by the low water mark.⁷⁶ Interestingly, there is a different approach to the application of the Directive in the different regional areas in the United Kingdom which varies from 1 mile on the coast of England, Wales and Northern Ireland, to 3 miles in Scotland. There may also be a case for extending the scope of application in Ireland to three miles, particularly on the east coast, where there is considerable pressure on water quality in coastal areas as a result of offshore activities.⁷⁷ Moreover, in the 3 mile coastal band there is a larger range of benthic and biotic fauna and flora and several marine SACs protected under the Habitats Directive.⁷⁸”

6.3 *Marine Strategy Framework Directive*

The Marine Strategy Framework Directive aims to protect the European marine environment by achieving good environmental status of the EU's marine waters by 2021 at the latest.⁷⁹ Under the Directive member States must develop and implement marine strategies in order to:

⁷⁶See discussion *infra*.

⁷⁷R. Long, *Marine Resource Law op.cit.* n.1

⁷⁸On the Habitats Directive see *Marine Resource Law* paras 10-143 to 10-151.

⁷⁹DIRECTIVE 2008/56/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). O.J. L 164/19, 25.06.2008.

(a) protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected;

(b) prevent and reduce inputs in the marine environment, with a view to phasing out pollution as defined..., so as to ensure that there are no significant impacts on or risks to marine biodiversity, marine ecosystems, human health or legitimate uses of the sea.

The structure of the Directive is very similar to the Water Framework Directive in some respects in so far as marine strategies must contain a detailed assessment of the state of the environment, a definition of "good environmental status" at regional level and the establishment of clear environmental targets and monitoring programmes. Each Member State must draw up a programme of cost-effective measures. Prior to the commencement of new activities an impact assessment which contains a detailed cost-benefit analysis of the proposed measures is required. Significantly, under the Directive 'marine waters' means:

(a) waters, the seabed and subsoil on the seaward side of the baseline from which the extent of territorial waters is measured extending to the outmost reach of the area where a Member State has and/or exercises jurisdictional rights, in accordance with the UNCLOS, with the exception of waters adjacent to the countries and territories mentioned in Annex II to the Treaty and the French Overseas Departments and Collectivities; and

(b) coastal waters as defined by Directive 2000/60/EC, their seabed and their subsoil, in so far as particular aspects of the environmental status of the marine environment are not already addressed through that Directive or other Community legislation.⁸⁰

Again the precise geographical scope of the *Marine Strategy Directive* is projected from the baselines.

⁸⁰ Article 3 of the Marine Strategy Framework Directive.

7 Habitats Directive

The Habitats Directive is aimed at the maintenance of biodiversity and contributes to the general objective of sustainable development in EC law.⁸¹ The Directive seeks to preserve and restore the natural habitats, the wild fauna and flora by obliging Member States to establish a comprehensive network of special areas of conservation for endangered and vulnerable species and habitats.⁸² The nature network established by the Habitats Directive in conjunction with the Birds Directive is known as *NATURA 2000* and consists of sites of international importance.⁸³ Special areas of conservation are generally designated by Member States but there is also provision for EC designation in exceptional circumstances where a site hosts a priority natural habitat type or priority species.⁸⁴ The Annexes of the Directive list the broad categories of natural habitat types and the specific animal and plant species of Community interest. Several Member States of the European Union including Ireland and the United Kingdom have applied the Habitats Directive to protect marine habitats in sea areas under national jurisdiction beyond the limits of the territorial sea.⁸⁵

In 2004, the European Court of Justice held that the United Kingdom had failed to transpose the Directive with respect to maritime areas outside territorial waters where it exercises sovereign rights, with the exception of the application of the directive to the activities of the oil industry.⁸⁶ Although the Court analysed the application of the directive to the marine environment in the context of the baselines, one surprising aspect of the judgement is the failure of the Court to define the continental shelf

⁸¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [1992] O. J. L 206/7 as last amended by Council Directive 97/62/EC of 27 October 1997 O.J. L305/42 October 8, 1997. Art. 2(1) of Council Directive 92/43/EEC. The preamble asserts that the Community has a common natural heritage which must be protected in a coherent and integrated way.

⁸² Art.2(1) of Directive 92/43/EEC.

⁸³ Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds [1979]O.J. L103/1.

⁸⁴ Arts 4 and 5 of Directive 92/43/EEC.

⁸⁵ See R. Long, A. Grehan, "Marine Habitat protection in a coastal Member State of the European Union: the case of deep-water coral conservation in Ireland" (2002) 17(2) *International Journal Marine and Coastal Law* 241. On the application of the habitats in sea areas under the sovereignty and jurisdiction of the Member States see *inter alia*: Case C-6/04 *European Commission v United Kingdom* ECR (not yet reported) judgment 20 October 2005; *R v Secretary of State for Trade and Industry, ex parte Greenpeace Ltd* [2002] 2 CMLR 94; statement from the European Commission in COM (1999) 363 final, section 5.2.2.

⁸⁶ Case C-6/2004 *Commission v. United Kingdom* [2004] ECR -.

correctly either in convention or as a matter of customary international law. More specifically paragraph 124 reads as follows:

“Finally, the continental shelf can extend to a maximum of 350 nautical miles from the **baselines**. Under Article 77 of UNCLOS, the coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources. This covers only immobile natural resources.”

This clearly doesn't accord with the text of Articles 76 and 77 of the Convention or indeed customary international law where the International Court of Justice held in the *North Sea Continental Shelf Cases* that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio* by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources.⁸⁷

8 Conclusions

The recent decision of the Irish Government to become party to the Convention on the International Hydrographic Organisation is to be welcomed as is their commitment to establishing a national hydrographic service and to updating nautical charts of the Irish coast. However, the success of this initiative will very much depend upon the resources that are committed to the technical survey work and to furthering the excellent working relationship with the UKHO. From a modern hydrographic perspective, there is a strong case supporting the shift to LAT as the tidal datum and WGS 84 as the horizontal datum. In parallel, there is little doubt but that reform of the legislation governing the baselines in Ireland is long overdue. In undertaking this task consideration should be given to specifying both the vertical and horizontal datum in the legal instruments on the baselines. Finally, the baselines and nautical charts are relevant to the implementation of a broad range of European legal instruments including the common fisheries policy and the new directives such as the Marine Strategy Framework Directive aimed at protecting the marine environment.

⁸⁷ [1969] ICJ Rep. 3 at 23

In this context, it is important to recall that the European Union is party in its own right to the 1982 LOS Convention. Accordingly, it is incumbent upon the European Court of Justice and the European institutions to uphold in a precise manner the normative framework established by the Convention including the provisions on the baselines and the continental shelf.

Please contact Dr. Ronán Long at Ronan.J.Long@nuigalway.ie should you wish to comment on this paper.