Property loss due to coastal erosion: judicial, legislative and policy interventions

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Abstract:
Ownership and management of the coastal margin are contested. Climate change is inducing sea level rise and increased frequency and severity of storm events. These processes are likely to put more coastal property at risk from erosion. Case law, legislation and central and local government policy in New Zealand support the general concepts of promoting the natural character of coastal land; recognising that land is not permanent and that the sea may take land; avoiding attempts to build structures against the sea; and preventing inappropriate development. However, demand for coastal property and the increasing value attaching to that property suggest that these concepts are contrary to the expectations of land owners. Local authorities are pressured to protect the property interests of their citizens, but also expected to make cost effective decisions about spending income wisely. There is central government support for implementing a policy of managed retreat, and there is strong economic logic to resist the costs of coastal defence. But inevitably, local communities are demanding continued protection, and preferably at government expense. This paper introduces some background legal issues and then discusses how law and policy is being implemented to manage the competing demands on private and public coastal land. The conflict is being played out in many coastal communities, and has not been satisfactorily resolved.

Keywords:
Coastal defences, erosion, managed retreat,

1 Introduction

Access to and protection of private property are strongly held principles in New Zealand, and legislation and case law have regularly provided protection of private property as a basic individual right. This has reinforced the emphasis on the rights attaching to land and property rather than on the responsibilities we have towards the land. The developing principles of sustainability, however, suggest that humans need to adapt to the forces of nature rather than to attempt to control or modify them for human needs.

Many areas of the coastline are now subject to significant erosion, much of it prompted by physical intervention in coastal processes (e.g. intervention in sediment replenishment from dammed rivers, modification of coastal landforms and clearance of vegetation cover), but increasingly recognised as arising from climate change and sea-level rise.

The coastal process relating to the power of the sea to change coastal topography is an inexorable and natural occurrence. A coastal hazard arises when developed and privatised coastal property is adversely affected by the sea's erosive effects.

This paper describes the judicial, legislative and policy interventions that direct how New Zealand land managers will deal with anticipated increasing encroachment of the sea over coastal property. A useful case study is presented of the Wainui Beach area in the Gisborne District on the east coast of New Zealand, where property is increasingly susceptible to loss by coastal erosion and the local authority attempts a withdrawal from the provision of coastal protection works.

2 Common law

The common law doctrine of accretion and erosion is strongly accepted within New Zealand law. Many property parcels have been created with the sea, lake or river defined as a boundary. This type of boundary is a natural riparian (or littoral) boundary, and as such, it is ambulatory; it moves with the movement of the land/water interface, and is not fixed by measurements on the ground or dimensions on a plan. One of the defining characteristics of such a boundary is that, as it moves, it may increase or decrease the area of land incorporated in the parcel, and a doctrine of mutuality applies; if land can be lost in this process then it can also be gained.[1] The process of gaining more land by the withdrawal of the water, or the building up of dry land by natural processes[2] is accretion, while the opposite effect (the removal of dry land or the encroachment of

[1] The North Carolina Court of Appeals in the case *Shell Island* (cited in Kalo 2005; 1489) states: "The courts of this state have considered natural occurrences such as erosion and migration of waters to be, in fact natural occurrences, a consequence of being a riparian or littoral landowner, which consequence at times operates to divest landowners of their property."

[2] See the case *Southern Centre of Theosophy v State of South Australia* [1982] 1 All ER 283 for some clarifying statements about the legal process of accretion; that it affects a natural riparian boundary; that it must be slow, gradual and imperceptible; that it

water over the land) is erosion. One of the significant legal tests to determine whether the legal boundary moves is whether the movement of the water/land interface is slow, gradual and imperceptible.[3] While this rule is widely applied in common law jurisdictions, it is not clear why it should be so,[4] as it produces a variety of anomalous situations.[5] If the legal boundary does not move, either the foreshore and seabed becomes subject to private title and therefore the right of the public for freedom of access is questionable, or the title becomes remote from the sea and looses those natural riparian rights of direct access and use.[6]

In New Zealand, therefore, much emphasis is placed on where the property boundary is at any particular time; whether the boundary has moved and how it has moved; what private or public rights exist; and where those rights can be asserted. This common law scenario appears to represent the legal position as it has been decided in New Zealand. However, the common law can always be superseded by legislative intervention, indeed, the purpose of legislation is to change, or clarify any uncertainty in interpretation of the common law.[7]

3 Coastal Legislation

The Crown Grants Act 1908 may provide such a statutory override of the common law doctrines of accretion and erosion as they apply to littoral boundaries[8] in New Zealand. The Act states (s35):

> Where in any grant the ocean, sea, or any sound, bay, or creek, or any part thereof affected by the ebb or flow of the tide, is described as forming the whole or part of the boundary of the land granted, such boundary or part thereof shall be deemed and taken to be the line of high-water mark at ordinary tides.

As Kalo (2005) has discussed in respect to exactly this situation in North Carolina, "An appropriate reading of the statute is that the mean high water mark remains the seaward

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must be as a result of natural processes; that it can be as a result of windblown sand; that it affects leasehold title just as it affects a fee simple title; and that it applies to inland lakes as to the sea.

[3] See *Humphrey v Burrell* [1951] NZLR 262 at p267 per Gresson J in the Supreme Court trial summarizing several Privy Council decisions "It is necessary that [the accretion] should have been brought about by a process so slow and gradual as to be in a practical sense imperceptible, …" The justification of this rule appears to rest on the maxim: *de minimus non curat lex* – the law takes no account of trifling matters.

[4] The alternative, is that the water/land interface moves by avulsion (by a sudden change such as by storm action), in which case the boundary does not move, and either the boundary encroaches into the seabed (in the case of physical erosion), or it becomes remote from the sea (in the case of actual build up of land).

[5] "Logically, the consequences of avulsion should be no different than those of the natural processes of erosion and accretion." (Kalo 2005;1440)

[6] The reason for the ambulatory nature of the boundary is "to preserve the fundamental riparian right-on which all others depend, and which often constitutes the principal value of the land-of access to the water" (Kalo 2005;1440 quoting *Lamphrey v. Metcalf* 1893)

[7] The common law remains as the fall back position if there is no overriding legislation. Bennion (1992;112) notes: "To describe the way Acts operate on existing law one can use the image of a floor upon which rugs are spread. The floor consists of unwritten law or lex non scripta, in other words common law, rules of equity, and customary rules. An Act is like a rug laid down on this floor. The Act conceals, for the area it covers, the texture underneath. That texture becomes visible again if the rug is later removed, that is that Act is repealed."

[8] littoral – adjoining the sea or tidal waters

boundary irrespective of changes in the contours of the shoreline and regardless of whether the changes are the product of the processes of erosion and accretion or the result of avulsion" (Kalo 2005;1442). The purpose of s35 of the Crown Grants Act is to clarify the definition of the littoral boundary and should logically to be read to mean that the boundary remains the mean high water mark, no matter how it has moved in the past.

However, case law, particularly *AG v Findlay*,[9] relating to a claim for land accreting to a natural seaward boundary, has continued to apply the common law tests of the slow, gradual and imperceptible accretion in a claim for title to accreted land adjoining a tidal boundary. Kearns *et al* (1997) cite Coulson & Forbes as authority for the law as applied in New Zealand: "Where the sea, or an arm of the sea, by gradual and imperceptible progress encroaches on the land of a subject, the land thereby covered belongs to the Crown[10] or the Crown's grantee of the foreshore; but where land is suddenly overflowed, and any marks remain by which its limit can be recognised, it remains to the original owner, and may be regained by art or industry; or if the sea retires again it is his as before" (cited in Kearns et al. 1997;34-35). I respectfully suggest that in applying a correct interpretation of the Crown Grants Act, but also looking at current values in land and assertions of public rights over the foreshore, this should not be the case. It is very unlikely that a littoral owner, having lost land to the sea, could have any success in asserting proprietorial rights over that sea space.

The individual rights attaching to property ownership are not absolute and must always be subject to legitimate planning rules that now, more than ever, focus on environmental protection and public rights. The Resource Management Act 1991 (RMA) has as its purpose "to promote the sustainable management of natural and physical resources" (s5). This implies "the ongoing ability of communities and people to respond and adapt to change in a way that avoids or limits adverse consequences" (MfE 2008;43). The Act establishes a regime that devolves authority to regional councils to manage, *inter alia*, the coastal environment, and implements a consent process for activities and land use. It also requires the preparation of national and regional coastal policy statements to guide landuse decisions.

The RMA defines matters of national importance (s6) which include: "the preservation of the natural character of the coastal environment … and protection from inappropriate subdivision, use, and development" and "the maintenance and enhancement of public access to and along the coastal marine area." Also authorities must have particular regard to "the effects of climate change" (s7).

In relation to coastal development, the activities specifically prohibited include reclamation of any foreshore, or any erection of any structure on any foreshore or seabed[11] unless expressly

[9] *Attorney General v Findlay* (1919) NZLR 513 GLR 207
[10] Implicit in this statement is the assumption that the Crown is the owner of the foreshore and seabed. In New Zealand this is an assumption that has been questioned in the recent Court of Appeal ruling of *Ngati Apa v AG* [2003] 3 NZLR 643, and that is still being negotiated by legislative changes of the Foreshore and Seabed Act 2004 in 2010.
[11] RMA part III Section 12. Section 9 covers similar conditions in regards to use of any other land.

allowed by a regional plan or a resource consent. In other words the regional council is charged with complete powers about what can be placed on the land – in this case, what structures can be placed to defend the land against the invasion of the sea.

The administration of the coastal environment, while required to be consistent with national policy, is delegated to local authorities. Regional authorities have jurisdiction covering land, air, water and over the coastal marine area which includes the foreshore (from Mean High Water Springs to mean low water springs) and the seabed out to the 12 nautical mile mark. The territorial authorities have jurisdiction over land use upland from MHWS. Furthermore, land below MHWS is now generally assumed to be owned by the Crown,[12] while upland is owned privately or by the local authority. This has potential to cause disputes about, for example, the ownership of shoreline protection structures relative to which side of MHWS[13] they are located.[14] This fragmentation of jurisdiction and ownership is contrary to the goals of integrated coastal management and must be solved.[15]

4 Coastal Policy

The proposed New Zealand Coastal Policy Statement 2008[16] was prepared "to strike the right balance between use, development and protection of our precious coastal environment" (DoC. 2008;5). It is based on the implementation of sustainability goals, including applying a precautionary approach.[17] The policy statement supports the preservation of the natural character of the coastal environment including natural processes, and allows for the management of subdivision and use, while enhancing the public utility of the coast as accessible and public open space (DoC 2008;13-14).

"Coastal Hazard risks are managed increasingly by locating or relocating development away from risk areas, protecting or restoring natural defences and discouraging recourse to hard protection structures" (DoC 2008;7 Objective 8). The policies addressing Coastal Hazards (DoC 2008;25-26) are more specific. Coastal hazard risk assessment must have regard to "the potential for natural coastal features and areas of coastal hazard risk to migrate as a result of dynamic coastal processes including sea level rise" and to "the effects of climate change … on storm frequency, intensity and surges, and coastal sediment dynamics" (DoC 2008;25 Policy 51(d) and (e)). Local authorities shall avoid new subdivision and development on land at risk from coastal

[12] This is asserted in the controversial Foreshore and Seabed Act 2004, but this Act is about to be repealed by a new Act that will vest the foreshore and seabed as public domain rather than Crown owned.
[13] A position not easily identified on the ground.
[14] A problem that Brookes (2001;10) describes as jurisdictional apartheid.
[15] In fact, in the case of Gisborne and Wainui Beach discussed herein below, the territorial authority; the Gisborne District Council, is actually, and rather unusually, a unitary authority and holds the powers of a regional council, so that conflict is alleviated.
[16] The current operative Coastal Policy Statement 1994 (DoC 1994) is long overdue a review.
[17] "A precautionary approach shall be adopted towards proposed activities whose effects on the coastal environment are uncertain, unknown or little understood, but whose effects are potentially significantly adverse to that environment" (DoC 2008;10). It is apparent that hard coastal defense structures must fall into this category of activity.

hazards and encourage managed retreat, by relocation, removal or abandonment of existing structures (DoC 2008;25 Policy 52).

Pursuant to this, the Ministry for the Environment is active in planning for climate change effects on coastal margins. A report to the Ministry (Bell et al. 2001;viii) warns that "coastal development and global warming are on an eventual collision course" and that "managed retreat and adaptation are the only reasonable long-term options." Regional councils have also prepared documentation (Turbott 2008) to assist the planning for coastal erosion and particularly the issues arising from implementing managed retreat – that is, abandoning property or relocating structures threatened by coastal processes. But in terms of putting any effective limits on coastal development, the proposed New Zealand Coastal Policy Statement is far from helpful.[18]

The point of the foregoing discussion is that owners of coastal property must be aware that while the nature of their natural ambulatory boundary allows them to gain by the seaward movement of the mean high water boundary, it also requires them to relinquish any claims to land lost by a landward movement. The question about what action such owners may take to defend their land from any loss to the sea is at issue here.

5 Case Law

Not surprisingly, given the significant financial stake they hold in their land, coastal property owners usually expect either to be able to defend their land themselves, or perhaps ideally, demand the government defend it for them. The reference above, that eroded land "may be regained by art or industry," supports the claim that there is a common law right for property owners to not just protect their land but also to reclaim it from the sea. It is doubtful whether such a right would have ever succeeded in a New Zealand court but certainly would not now.[19]

The right to protect ones land from the sea was argued in the case *Falkner v Gisborne District Council* 1995.[20] Since the 1920s the near foreshore of Wainui Beach has been occupied by housing. The local authority undertook various beach protection works, including sheet pile groynes, rock walls, and post and rail walls, in an attempt to retain and support the beach fore-dunes as a line of defence for the inland properties and houses. Consequent upon occasional severe storm damage to the defensive works, a high level of pressure was exerted on the local authority to continue to enhance these defences to protect private property. By the 1990s the Department of Conservation and the Gisborne District Council reassessed the feasibility of them providing this engineered solution to holding back the sea, and proposed to allow the sea naturally to take its toll – to implement a policy of managed retreat.

[18] Peart (2009;237) describes the document as "a damp squib."
[19] under the regulatory regime of the RMA
[20] *Falkner v Gisborne District Council* [1995] NZRMA 462

Adjoining landowners expected that the protection work was a continuing local government responsibility. The expectations that property should not be lost without just compensation, led residents to object to the new policy by lodging a claim to the Planning Tribunal and subsequently an appeal to the High Court.

Evidence was presented about the likely increased threat of coastal erosion due to sea level rise and also about the desirability of maintaining a fight against the forces of nature. The question of whose responsibility it was to protect property was raised at a philosophical level but also at a practical level regarding ownership of land where coastal protection works were built, and the location of MHWS.[21]

The judicial argument focused around 3 main issues, namely the common law duty on the Crown to protect the land from invasion; the common law right of individual owners to protect their own property; and whether the statutory intervention of the Resource Management Act 1991 has abrogated or modified those duties and rights (at p466).

In examining the arguments for the rights and duty to protect property, the court quoted Halsbury (at p471): "It is the royal duty of the Crown to preserve the realm from the inroads of the sea by appropriate defences; and every subject has a corresponding right." However, the court observed that the private right was not absolute: "… no doubt the ordinary rights of property must give way to that which is done for the protection and safety of the public" (at 471).[22]

The court, in response to the claim that every landowner has a right to protect his or her land from the inroads of the sea, stated that such an approach "manifests a narrow 19th century preoccupation with proprietary rights, out of keeping with the more holistic policy concerns of sustainability and environmentalism popular today" (at p475). The court decided that the policy of managed retreat was a justifiable response to coastal erosion and that this process was not an evil that takes away property but an expected result of natural processes.

In essence, therefore, the court did not deny that there may have been those rights and duty to protect property, but that the statutory intervention of the RMA and its purpose of the sustainable management of natural and physical resources, establishes a regulatory regime that overrides the common law rules of protection. In other words, the local authorities may refuse resource consents for protective structures that are contrary to their vision of the natural character of coastlines, and that effectively destroy the public amenity values in favour of protecting private property. Property purchasers and owners must be well warned that they carry all liability against loss.

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[21] Under the Resource Management Act 1991 the coastal marine area was defined by Mean High Water Springs. The fact that the property boundaries were defined as Mean High Water Mark appeared to be ignored in these arguments. Expert evidence of surveyors was required to define the actual location of the MHWS line on the ground, and it was not a straightforward decision. It is no surprise, however, that the tide regularly reached the foot of the hard defensive structure; as it always will on an eroding beach.

[22] quoting Coulson & Forbes.

6 Risk, Responsibility, Property Value and Compensation

The assurances and protections that attach to a fee simple title in New Zealand suggest that title to land is forever, but this "ignores the reality that the underlying land may itself be impermanent" (Turbott 2006;44). By common law, the ownership of property with a riparian or coastal boundary allows for a gain of land by accretion, matched by the loss of land by erosion: the possibility of a benefit is matched by the threat of a corresponding loss. This principle has been lost sight of often by those owners suffering from drastic loss of property, but local authorities and the courts could more forcefully reassert that the loss is a natural consequence of coastal property ownership.

The responsibility for property loss is primarily the concern of the affected property owner (ARC 2003;20), as are any effects of structures built to protect one property but have nuisance and aggravating effects on neighbouring properties.

Evidence suggests that the market value of coastal property is largely unaffected by the risk of coastal erosion (Turbott 2006;12).[23] Similarly, American research (cited in Dahm 2002;24) has found that coastal property owners find "the risk [of coastal erosion] acceptable because they 'want to be there', the amenities of an oceanfront location (e.g. view, easy access to the beach, water recreation, peace and quiet) appearing to meet deeply felt emotional needs of the people who owned property there."

Economic arguments could also be raised to support the loss of property. Coastal proprietors have almost invariably gained by the disproportionate increase in property values as a result of continuing demands for coastal land. The normal risks of investment in property, such as the windfall profits reaped by taking advantage of social demands, should be balanced by exposure to the risks of loss to the erosive forces of the sea. It should not be for the wider public, through taxes or property rates, to compensate for such property loss.

In the past, local authorities have built coastal defences to protect their communities, and the political and economic power deriving from the value of coastal property has imposed a strong imperative to maintain such structures. Furthermore, the more recent style of coastal development[24] suggests that "we have 'given up' on preservation and protection of natural character of much of our coast" (Brookes 2001;8).[25]

Property insurance is the normally expected fallback position for property owners affected by loss. Property damage from flooding is insurable, but usually such property can be reoccupied.

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[23] Even when hazard warning notices are entered on the title document, values continue to increase (Turbott 2006;22)

[24] Recent development typically involves high value holiday homes dominating coastal landscapes, built to maximize view and proximity to the beach, and several examples of the creation of artificial waterways and canal-centred development on totally manmade shorelines.

[25] Brookes continues (2001;9) "A cohesive and informed community concerned about the health of their local coastal system becomes replaced (if it ever existed) by individuals concerned with the protection of private property and the effective removal of now hazardous coastal processes from their proximity."

Eroded land is gone for good, there is a total loss. Given the inevitability and expected worsening of the coastal threat, it would appear reasonable to expect insurance companies to withdraw or deny cover for losses incurred by coastal erosion, especially by the gradual process of sea level rise. Government compensation schemes (such as the Earthquake Commission) have often covered property loss due to natural disaster, but this is only available for severe unpredictable events. While the government has an interest in supporting the property market, it should not take responsibility for the gradual effects of coastal erosion from which all property owners have due notice and time to retreat. The possibility of Crown or local authority buy-out is a useful option, but the expense of compensating for unrealistically inflated coastal property values is a significant impediment. There are a wide variety of financial assistance packages that could be made available, including full compensation for loss, subsidies for relocation, and buyout and lease back arrangements. But ultimately any such financial incentives will artificially prop up the property value, providing individual benefit at public expense, and continue the resistance to voluntary retreat.[26]

More appropriate legal interventions may include covenants on titles identifying a coastal hazard (including no-complaints covenants preventing claims being made against neighbours, or local authorities, or even the acts of nature), time limited landuse consents, and short term occupation licences. Ambulatory public access or conservation strips, as are allowed for under the Conservation Law Reform Act 1990[27] in relation to public strips abutting water, and as have been described in Titus (1998;1313) as rolling easements, could provide appropriate notice to coastal property owners of the vulnerability of coastal titles. It could also be possible to convert existing use rights on the sale of any at risk property, to short term occupation licences.[28] Such takings or confiscations[29] of otherwise unencumbered title would, however, inevitably initiate compensation applications that would be hard for government to defend.[30]

Probably the best coastal management strategies of all, although mostly limited to future land use planning on undeveloped land, is to establish regulations requiring mandatory setback distances, setting aside of wide public land margins, requiring relocatable housing, and only allowing the subdivision of land into short timeframe leasehold titles. In addition, public infrastructure, like roads should be designed perpendicular to the coast to avoid future erosion threats to the fixed and vital hard structure.[31]

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[26] See Defra (2009;7) "Government intervention should not undermine the policy messages in relation to coastal erosion, that: coastal erosion is a natural process and cannot be stopped, and individuals investment decisions should be made reflecting the risks of coastal change and should not rely upon the provision of defences or financial assistance."

[27] Part IVa - although only in relation to the disposal of Crown land

[28] By placing a memorial such as a caveat, on affected Certificates of Title.

[29] See also Stallworthy's arguments about environmental justice and the difficulty of determining how much restriction on land amounts to confiscation and may trigger compensation (2006;367).

[30] It is worth emphasizing Turbott's (2006;2) assertion that "Fee simple property tenure is probably the largest barrier to implementation of managed retreat. This is because it involves an expectation of permanent use of the titles. Unfortunately, the underlying physical land may not be permanent. This problem is compounded by the high and increasing value of coastal property."

[31] Some design possibilities are illustrated in Turbott (2006)

7 Coastal Protection Works

National policy prioritises natural character and processes, legal decisions dismiss the absolute rights of property owners; technical reports confirm the inevitability of sea level rise and erosion; resource consent conditions and encumbrances on titles may warn of land loss; but actual practice illustrates the power base that coastal property owners can exert on local authorities. Brookes (2001) quotes a Ministry of Works report that identified the difficulty of getting political leverage to support integrated coastal management "given the present financial structure and electoral base of most coastal counties." This may suggest that local coastal planning should be removed from local councils and passed to "some organisation which is less dependent on local opinion and local financial support" (Brookes 2001;7).

In spite of the success the Gisborne District Council had in front of the Court in the *Falkner* case, the council has prepared the Wainui Beach Management Strategy (WBMS) (GDC 2003) to provide for the continued protection of coastal property by the erection of defensive structures to maintain protection of private property – relenting to the demands of local property owners.

A Resource Consent application (GDC 2009) has been lodged by the local council for the construction of a sloping rock revetment to protect the dunes and adjacent coastal property. The consent application implements aspects of the WBMS and asserts that the works will be an improvement on previous structures that have become ineffective and have become a hazard. The application also asserts that the beach is already a highly modified environment and the beach protection projects now 'form part of the natural character' (GDC 2009;9) of the beach. It seems an effective policy of managed retreat is too hard, too expensive and too politically unacceptable to implement.

Hard structures such as rail irons, posts and logs, have been exposed as ultimately succumbing to the forces of wind, tide, waves and sea level rise, and they disturb natural processes and ecosystems. Inevitably the beach is removed by erosion up to the base of the hard structure, and storms and the tide will continue to undermine hard defences. Moreover, the structures are unsightly on the coastal landscape, create dangerous obstacles and are impediments to public access. But that is not to say that nothing can be done. Research is being undertaken on geotextiles to hold sand and beach sediment[32] as an alternative to the hard structures used in the past, and there are many examples of restoration of dune vegetation successfully protecting beach frontages.[33]

[32] Beach replenishment has only been applied on a small scale in New Zealand.
[33] See Peart (2009).

8 Conclusion

The coastal margins of our land mark a significant zone of conflict, where not just the land and the sea clash, but environmental, social, economic, legal and engineering issues also are at odds. The extremely strong preference for coastal property exhibited by the population overrides the hazard risk evident by even casual observation. Furthermore, there is a strong expectation that land and property rights should be permanent and protected from loss. The judicial, legislative and policy suggestions to the contrary will require careful negotiation. But just as the physical defences against the power of the sea are failing, inevitably, so too will people and property give way to the sea. We cannot afford, economically or environmentally, to hold back the sea.

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