As the incoming Obama administration begins to engage the issue of climate change, the public’s preferences regarding action on this matter are sure to play an important role. The 20th century was one of unprecedented human impact on the natural environment. The past century also was a rich one for the history of ideas about nature and their manifestations in politics, and law.

Wetlands drainage deserves to stand with dam building and irrigation development in the history of large-scale water manipulation in the past century. The creation of the ‘Bureau of Reclamation’ (1902) marked the beginning of federal efforts to develop western water resources. As the century progressed, dam building took on a life of its own.

The different treatment of American administrations to water, its resources, exploitation, conservation and development throughout history owes much importance to the socio-economic situation of the time, irrespective their political affiliation whether Republican or Democrat.

If at the beginning of the 19th century, water was a matter of expansion, commerce and a means of transport, it has turned into conservation and preservation from the 20th century onwards. Besides, water exploitation was not properly defined in the Constitution which gave rise to much controversy in the 19th century.

19TH CENTURY TREATMENT.

Urban growth and population distribution owed much to the revolution in transportation that began about 1815 and continued until the Civil War. By the end of Jackson’s term (1837), a national transportation network had been established through a system of roads and canals. Robert Fulton’s introduction of the steamboat (1807) quickened interest in the possibilities of water transportation and led to a boom in canal building. Steamboats plied the western rivers in the 1850s.

Of all the canals constructed in America, the most famous was the Erie Canal in New York, providing access to the expanding markets of the West. The Erie Canal was an engineering marvel, the longest canal in the world, which traversed rivers and valleys, forests and marshes.

The rapid development of the West and the South created a need for adequate transportation facilities to link the agricultural regions with the markets of the eastern seaboard. President James Madison, in his last annual message, recommended a federally subsidized network of canals but his misgivings about its constitutionality led him to indicate the necessity for a constitutional amendment, the so-called ‘Bonus Bill Veto’.
Modern industrialism appeared first in New England. At Lowell, Massachusetts, the Merrimack Manufacturing Company developed a water-powered plant in 1822, known as ‘The Lowell System’, in which spinning and weaving by power machinery had been brought together for the first time.

Textile mills along New England’s rivers provided new jobs, but in the process it transformed the environment. The mills, led by waterpower, led to deforestation and air pollution. In pre-industrial America the right to use water was reserved to those who owned land adjoining streams and rivers. Canals, locks, and dams were built to facilitate the needs of the proliferating mills.

Between 1834 and 1836 the States plunged heavily into debt to finance the building of roads and canals, inspired by the success of New York’s Erie Canal. Up to 1850, the US expanded all the way to the Pacific coast. Innovations in transportation, canals, and steamboats conquered time and space and knit together a transcontinental market.

As it can be seen, water was a means of expansion, commerce and transportation along the 19th century. What was then the reaction of the American presidents in view of a clearly missing constitutional vindication? Only a few ones, five out of the first twenty-five, such as Thomas Jefferson, James Madison, James Monroe, John Quincy Adams, and Zachary Taylor, did something in one way or another. The rest of 19th century American Presidents, from George Washington up to William McKinley did nothing about it, or at least were unable to cope with the problem.

Incidentally enough is the circumstance that the five above mentioned presidents were in office in the first half of the 19th century, starting off with Jefferson (1801-1809) and ending up with Taylor (1849-1850). In the second half of the 19th century, from Millard Fillmore to William McKinley, no major involvement in water resources can be appreciated.

The justification for this may well lay in the fact that it is precisely in the first half of the 19th century when there is the great migration process in America to the west expanding to the Pacific. Furthermore, it was a matter of consolidating and expanding the newly-born country, whereas the second half was a matter of reconstruction and recovery of a country after a Civil War.

The third president in the US, Thomas Jefferson (1801-1809) asked Congress for a Constitutional amendment empowering the federal government to build a national system of roads and canals. In his ‘First Inaugural Address’ (1801) he proposed an encouragement of agriculture and its resources: “The property and sovereignty of the Mississippi and its waters secure an independent outlet for the produce of the Western States and an uncontrolled navigation through their course”1.

Even an expedition in 1806 for exploring the river Missouri was carried into with the purpose of securing the best communication possible from that to the Pacific Ocean. That expedition furnished material for commencing an accurate map of the Mississippi and its western waters.

Jefferson also delivered a ‘Special Message to Congress on Indian Policy’ on matters of commerce on the Mississippi, offering a continued navigation from its source to the Atlantic through the Illinois, the Lakes and Hudson, and through the Tennessee River. The interests of commerce place the principal object within the constitutional powers and care of Congress.
The fourth president, James Madison (1809 – 1817), helped frame the ‘Bills of Rights’. Proofs of a just policy were seen in the improvements of agriculture in his ‘First Inaugural Address’ promoting by authorised means improvements friendly to agriculture.

Since he led the country through the inconclusive war of 1812, his maritime preoccupations were built upon the fortification for the defence of the maritime frontier. Once it was over, it turned into a matter of improvement and expansion: “Among the means of advancing the public interest, the occasion is a proper one for recalling the attention of Congress to the importance of establishing throughout our country the canals which can be executed under the national authority”2.

In his last official act as President, ‘Veto Message on the Internal Improvements Act’ (1817), James Madison vetoed a bill that would provide federal funding for building roads and canals throughout the US. The President found no expressed congressional power to fund roads and canals in the constitution, and he believed that the federal government should not encroach upon matters delegated to State governments.

James Monroe (1817 – 1825), the fifth president, declared the Americas no longer subject to European colonization. In his ‘First Inaugural Address’ he recognized the importance of nature which had done so much by intersecting the country with so many great rivers, bays, and lakes.

In his ‘Second Inaugural Address’ he referred to the attainments by the River Mississippi, which had become the property of the US from its source to the ocean with all its tributary streams. This view reflected the importance given to the physical attainments in the country expansion.

Monroe also recognized the controversy in the role of the Congress and States in enacting a system of navigation: “A difference of opinion has existed from the first formation of our Constitution to the present time among our most enlightened and virtuous citizens respecting the right of Congress to establish a system of improvement by means of roads and canals”3.

Many citizens were of the opinion that the waters of the Chesapeake and Ohio may be connected together by a continued canal. Connecting the Atlantic with the Western country in a line passing through the seat of the National Government, it would contribute to strengthen the bond of Union.

The next president concerned with water matters was John Quincy Adams (1825 – 1829). In his first annual message to Congress, Adams presented an ambitious program for modernization of the country that included roads, canals and other initiatives: “The Board of Engineers for Internal Improvement have been actively engaged in the provision of the necessary surveys and plans on the subject of roads and canals”4.

Adams also recognized the role of the War Department, on the internal improvements and surveys for the location of roads and canals: “The first object to which their labours were directed was the examination of the country between the waters of the Potomac, the Ohio, and Lake Erie, to ascertain the practicability of a communication between them”5.

These references to the reports of river conditions kept on an important place in his third annual message to the nation, expanding the survey to the rivers and canals of the south and west: “Reports
are now prepared on surveys of the peninsula of Florida to ascertain the practicability of a canal to connect the waters of the Atlantic with the Gulf of Mexico”6.

The last 19th century President concerned with water matters was Zachary Taylor (1849 – 1850). From him onwards, no other president will take water exploitation, conservation or resources as the central axis of his papers, speeches or documents. In his ‘Inaugural Address’ he recommended such constitutional measures to Congress as may be necessary to improve rivers and harbours.

Taylor was even the first president to sign agreements with a foreign country on the construction of a ship canal out of US territory: “A contract having been concluded with the State of Nicaragua for the purpose of constructing a ship canal to connect the Atlantic and Pacific Oceans”7. Therefore it became important that a line of communication should be opened within the territory of the US from the navigable waters of the Atlantic or the Gulf of Mexico to the Pacific.

As previously stated, no other 19th century president will include water references in their official documents. Which might have been the reasons for this absence? There is a very important factor in the second half of the 19th century. And that is the Civil War. Once the Civil War was over in 1864, it was a matter of reconstructing a devastated country, and of reconciliation of a divided nation.

20TH CENTURY TREATMENT.

Few topics have been as pivotal to environmental historiography as the control of water. Donald Worster has argued that 20th century western water development produced a hydraulic society in which a power elite dominated nature and labour alike. Richard White has similarly insisted that we need to see developed rivers as “organic machines”, hybrids of the natural and artificial.

It is undeniable that 20th century western water development had a transformative impact on the nation’s arid lands and their rivers. And the west was not the only region so transformed since the south’s waterways were also re-engineered. Finally, large-scale dam building became a staple American export to developing nations.

The 20th century began with basic urban water delivery and waste disposal systems in place, but because most sewers dumped waste water into local watercourses, downstream municipalities faced new challenges in acquiring potable water. Early in the century, treatment of polluted water sources emerged as a technological solution.

The rise of a significant body of conservationist and preservationist sentiment dated from the mid-19th century, but the Progressive Era marked the rise of State conservation. The federal government extended as manager of natural resources, protector of wild nature and guardian of human health.

Various presidents, under the authority granted by the ‘Forest Reserve Act’, set aside millions of acres of forest reserves. ‘The Newlands Act’ (1902), which created the Bureau of Reclamation, represented a utilitarian approach to western water development. As a result, most 20th century president, 10 out of 18, made references to water development and conservation.
The first president of the 20th century, Republican Theodore Roosevelt (1901 – 1909), set forth the new attitude toward the natural resources in the following words: “The forest and water problems are perhaps the most vital internal problems of the US”8. Roosevelt was, and has been, one of the most involved presidents on water improvement with continuous references to it in each of his annual messages to the nation.

This was the beginning of the water-power policy now substantially accepted by the public, and doubtless soon to be enacted into law. The ‘Forest Service’ established the policy of regulating the use of power in the public interest and making a charge for value received.

The first formal step was the creation of the ‘Inland Waterways Commission’ appointed in May 1907. In it, it was appointed the value of streams as great natural resources to the need for a progressive plan for their developments and control.

Since the forests alone cannot fully regulate and conserve the waters of the arid region, Roosevelt recognized the need of great storage works to equalize the flow of streams, and to save the flood waters. It is properly a national function, at least in some of its features.

He also saw that it was as right for the National Government to make the streams and rivers of the arid region useful by engineering works for water storage as to make useful the rivers and harbours of the humid region.

Under Roosevelt, Congress for the first time provided that an isthmian canal should be built at Panama, ‘Panama Canal’. This canal will be one of the greatest engineering feats of the 20th century, and it will be of great benefit to America.

Again Roosevelt turned to the importance of forest reserves in his annual message. Forest reserves are created for two principal purposes. The first is to preserve the water supply of irrigation ranchers, cities and towns to whom municipal water supplies are of the very first importance.

Even he enacted the so-called ‘Reclamation Act’ (1905), which required that no right to the use of water for land in private ownership should be sold for a tract exceeding 160 acres to any one land owner. Improvements of harbours and bridges continued although limited by the cutting down of the revenue which forbade the expenditure of any great amount from current income.

In one of his final addresses to the nation, Roosevelt again emphasized the importance and conservation of natural resources: “The conservation of natural resources and their proper use constitute the fundamental problem which underlies almost every other problem of our national life. Our great river system should be developed as National water highways”9.

The government dams should be used to produce hundreds of thousands of horsepower as an incident to improving navigation, appointing an ‘Inland Waterways Commission’ (1907) to study and outline a comprehensive scheme of development.

Finally in his last annual message, Roosevelt called into action for the improvement of inland waterways: “Action should be begun forthwith for the improvement of our inland waterways, action
which will result in giving us not only navigable but navigated rivers. This condition is the direct result of the absence of any comprehensive and far-seeing plan of waterway improvement”10.

The next president to take water resources into consideration was William Taft (1909 – 1913) who turned to the problem of forest conservation in his ‘Inaugural Address’: “The putting into force of laws which shall secure the conservation of our resources, including the most important work of saving and restoring our forests and the great improvement of waterways, are all proper government functions which must involve large expenditure if properly performed”11.

There are pending before Congress a large number of bills proposing to grant privileges of erecting dams for the purpose of creating water power in our navigable rivers. In order that most of the navigable rivers may be made fully useful for navigation there has come a method of improvement known as ‘the slack-water method’ to make the water power available for the further improvement of navigation on the stream.

Democratic Woodrow Wilson (1913 – 1921) was another key relevant president in the treatment of natural resources. The ‘Water Power Act’ (1919) established a Federal Power Commission. The Act applied to water power reserves on public lands of the US and to navigable streams, including falls, rapids and shallows. The Commission was empowered to issue licenses for the construction and operation of facilities for improving navigation and developing power.

Wilson discussed the best policy to pursue with regard to the use of forests and water powers in the rich States of the West: “The water power of our navigable streams outside the national domain, even in the eastern States, is still not used as it might be. The great measure to encourage the use of the navigable water outside that domain for the generation of power has already passed on”12.

Wilson thought to be imperatively necessary that the consideration of the full use of the water power of the country as is still under the control of the Federal Government should be immediately resumed and dealt with at the earliest possible moment: “We ought both to husband and to develop our natural resources, our forests, our water power. I wish we could have made more progress than we have made in this vital matter”13.

Republican Calvin Coolidge (1923 – 1929) was the next president to get involved in environmental matters. He killed a plan to produce cheap federal electric power in the Tennessee River, though “He resumed the opening of the intracoastal waterways, the control of flood waters of the Mississippi and of the Colorado Rivers, and the improvement of the waterways from the Great lakes toward the Gulf of Mexico”14.

For many years, the country was involved in plans for the development of the intracoastal and inland waterways. The government also expended large sums upon scientific research and engineering investigation in the promotion of the Colorado River.

The ‘Colorado River Commission’ (1925) agreed upon an interstate compact to settle the difficulty of the water rights, subject to the ratification of the State legislatures and Congress. It is then imperative that flood control is undertaken, and preparation made for power and domestic water.
Coolidge recognized in his annual message the importance of the development of water power: “Along with the development of navigation should go every possible encouragement for the development of our water power. Every facility should be extended for the connection of the various units into a superpower plant”15.

Floods change the course of history, and the ‘flood of 1927’ was no exception. When the waters of the Mississippi broke through banks and levees that spring, the disaster was enormous. Such flooding was a national problem, and had to be solved nationally and vigorously.

A definite federal program relating to waterways was proposed when the Congress authorized a comprehensive survey of all the important streams of the country in order to provide for their improvement, including flood control, navigation, power and irrigation.

Coolidge proposed legislation desirable for the construction of a dam at Boulder Canyon on the Colorado River, primarily as a method of flood control and irrigation. Flood control is clearly a national problem and water supply a government problem.

In his annual message, he related the improvement of rivers and harbours, passing even several river and harbour bills: “For several years the Congress has considered the erection of a dam on the Colorado River for flood control, irrigation and domestic water purposes, all of which may be considered as Government functions. There would be an incidental creation of water power which could be used for generating electricity”16.

Republican Herbert Hoover (1929 – 1933) was working on the problem of the Colorado River and the parched Southwest. Hoover agreed with the conservatives that it was wrong for Washington to intervene, but he also firmly agreed with Roosevelt, who believed that State governments must involve themselves in hydropower.

Hoover’s plan for the Colorado River was coming together as the States agreed to the project. Congress would approve the dam agreement and allocate funds for it. Hoover’s meticulousness about the legal process for the ‘Colorado Dam’ reflected the tensions of the times.

The Colorado Dam was becoming Hoover’s demonstration that the problem of power could be solved another way than by naturalization. Hoover stayed firm in his old positions. The dam on the Colorado ought to be hurried along, but only because it was constitutional.

Democratic Franklin D. Roosevelt (1933 – 1945) accomplished one of the most important developments in US history, the ‘Tennessee Valley Authority’ (1933). The federal government constructed dams to generate hydroelectric power, providing the power cheaply to people. He proposed a program to bring recovery to agriculture.

There was a question for which Roosevelt already did have an answer. It was the question of control of natural resources, and especially the hydroelectric power that could be generated by dams. As president, he saw the matter as Washington’s task. Power resources generally were too important to stay in the private sector. They belonged to the people.
Roosevelt’s main concern was conserving and developing natural resources such as land, water and power forests: “A study of our natural resources shows the vast amount of necessary and practicable work which needs to be done for the development and preservation of our natural wealth. The sound use of land and water is far more comprehensive than the building of dams”17.

Beginning in 1934, the State and federal Governments cooperated in planning a large number of projects, many of them directly aimed at the alleviation of future drought conditions: “Thousands of wells have been drilled or deepened, community lakes have been created and irrigation projects are being pushed forward”18.

Water conservation by means such as those was being expanded as a result of the new drought all through the Great Plains area, the Western colt belt and in the States that lie further south. The ‘Great Plains Drought Area Committee’ worked on emergency projects will conserve soil and water in the future in those areas most frequently hit by drought.

His successor in office after his death, Harry Truman (1945 – 1953) kept on environmental policies passing on the ‘Water Pollution Control Act’ in 1948, though much of his effort was put in the reconstruction of the world after the Second World War.

The original statute authorized the Surgeon General of the Public Health Service, in cooperation with other Federal, State, and local entities, to prepare comprehensive programs for reducing the pollution of interstate waters, and improving the condition of surface and underground waters.

After Truman, a couple of decades went on until the next president, Republican Richard Nixon (1969 – 1974) took on seriously water concerns. Nixon’s presidency seemed to be successful in environmental matters. During his first term as President, Congress passed the ‘Water Quality Improvement Act’ which attempted to control pollution caused by industry and power companies.

At a government level, the ‘National Environmental Policy Act’ (1970) created the ‘Environmental Protection Agency’ which enforced federal law on the environment: “In this past third of a century, government has passed more laws, spent more money, initiated more programs than in all our previous history, in protecting our environment and enhancing the quality of life”19.

Nixon proposed to Congress a nationwide clean waters program to put modern municipal waste treatment plans in every place in American where they are needed to make waters clean again. We should begin to treat air and water as scarce resources. We have been too tolerant of our surroundings and too willing to leave it to others to clean up our environment.

Nixon was also one of the first presidents to reckon that the waste discharged into the air and water was not just a national problem, but rather a broad international approach was necessary: “The 1972 Stockholm Conference on the Human Environment will consider the whole range of environmental problems. We are also participating in discussions on the environment with diverse groups”20.
After Nixon’s resignation from office, Democratic Jimmy Carter (1977 – 1981) attracted public attention by emphasising ecology. His achievements were notable in an era of rising energy costs, and he championed human rights throughout the world.

Carter dealt with the energy shortage by establishing a national energy policy. He brought together different agencies to create a new Department of Energy: “The fact remains that on the energy legislation, we have failed the American people. We still do not have a national energy program”21.

President Carter spoke to the American people about the importance of an energy policy that focused on conservation of the nation’s natural resources and a new energy department. The program emphasised conservation.

His most important achievement was the signing of treaties on the ‘Panama Canal’ which would assure a peaceful and prosperous future for an international waterway of great importance. The treaty, made sure that the Canal would gradually become property of Panama again: “This agreement forms a new partnership to insure that this vital waterway, so important to all of us, will continue to be well operated, safe, and open to shipping by all nations”22.

The last 20th century president under consideration is precisely his last holder in office of the century, Democratic Bill Clinton (1993 – 2001). He sought legislation to strengthen environmental rules, promising a brighter tomorrow.

Clinton’s most important achievement in environmental matters was the ‘Safe Drinking Water Act’ passed in 1996. This Act improved the quality of drinking water by tightening the standards of the Clean Water Act. Under this act, the Environmental Protection Agency can set water quality standards to assure safe drinking water for the public.

The magnitude of his concern on environmental matters is summoned up in his ‘Farewell Address’ in 2001: “In all the work I have done as President, I have tried to give all Americans the tools and conditions to build the future of our dreams in a good society with a strong economy, a cleaner environment, and a freer, safer, more prosperous world. Our air and water are cleaner. Our food and drinking water are safer”23.

His initial messages to the nation were developed under the planning of the most ambitious environmental cleanup of the time, to put people to work and to preserve the environment for the future: “This year we will fight for a revitalized Clean Water Act and a Safe Drinking Water Act and a reformed Superfund program”24.

Clinton challenged businesses and communities to take more initiative in protecting the environment, with the necessity of making it easier for them to do it: “We must protect our environment in every community. In the last 4 years, we strengthened our nation’s safe food and clean drinking water laws. Now we must be as vigilant with our rivers as we are with our land”34.

The following year, he launched a new ‘Clean Water Initiative’ (1998), a far-reaching effort to clean our rivers, our lakes, our coastal waters for our children. Our communities are only as healthy as the air our children breathe, the water they drink, the earth they will inherit.
Clinton was also one of the first presidents in 1998 to openly talk about the global climate change and global warming which, he said, required worldwide action. America led the world to reach a historic agreement committing our nation to reduce greenhouse gas emissions through market forces, new technologies, and energy efficiency.

PRESENT-DAY TREATMENT.

Finally, we are going to consider the last president in US history, Democratic Barack Obama (2009). Though his term in office is rather short, but for a few months, he has already made some references on energy, climatic change and the environment. President Obama has a comprehensive plan to invest in alternative and renewable energy, address the global climate crisis and create millions of new jobs rebuilding our roads and bridges, making the US a leader in climate change.

All this is reflected in his ‘Inaugural Address’ in which he pledged to work alongside the people of poor nations to make farms flourish and let clean waters flow: “Each day brings further evidence that the ways we use energy strengthen our adversaries and threaten our planet. With old friends, we will work tirelessly to roll back the spectre of a warming planet”25.

The budget Obama will submit to Congress for approval will invest in the 3 areas that are absolutely critical to our economic future: energy, health care, and education. We know that the country that harnesses the power of clean, renewable energy will lead the 21st century.

CONCLUSIONS

The results of this analysis provide the basis for some fairly clear conclusions regarding Americans and climate change. Most Americans nowadays believe that immediate government action is needed to deal with climate change and that governments at all levels of the federal system have responsibility to deal with the matter.

However, this consciousness from the 20th and 21st centuries clearly contravenes the political views from the 19th century. The treatment to water resources at the beginning of the 19th century was concerned as a matter of expansion to the West, commerce and a means of transport. This view has turned into conservation and preservation at present with most administrations worried about the consequences of climate change.

NOTES

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