La Ninas Hurt The Economy More Than El Ninos

By Joseph D'Aleo, CCM

In the 1980s and 1990s, before the media's favorite weather topic was climate change or global warming, it was all El Nino. It was blamed for virtually any weather event that occurred in El Nino years. It is true that El Ninos when strong are capable of producing losses that can total in the billions of dollars. El Ninos are feared in places like Indonesia, Australia, India, Brazil, Mexico, and parts of Africa where devastating droughts are possible. In the United States, southern states from California to Florida are vulnerable to damage from a barrage of strong winter storms.

Here in the United States, the El Nino of 1997/98 played a role in 18 President declared disasters with a total damage exceeding $4 billion.

However, the patterns of weather associated with strong El Nino events also produce many very positive effects and benefits.

For example, the milder temperatures of strong El Nino winters in the interior northern United States reduces heating costs for both homes and industry and the operating costs for transportation both by air and on land. Less snowfall in the north lowers the costs of snow removal for government and industry, and enables the construction industry to work more during the winter months. Shoppers are able to get to and from stores more easily and often and retail sales benefit. El Nino also typically results in less flooding during the spring and fewer hurricanes in the summer.

Stan Changnon, former head of the Illinois State Water Survey in the Bulletin of the American Meteorological Society in September, 1999 estimated the economic gains and losses during the great El Nino of 1997/98. He showed that the benefits were much greater than the losses.

ECONOMIC IMPACT	LOSSES	BENEFITS
Property Losses	$2,800,000,000	
Federal Government Relief	$400,000,000	
State Assistance	$125,000,000	
Agricultural Effects	$675,000,000	
Reduced sales of Snow Removal Equipment	$70,000,000	
Tourism, Recreation	$190,000,000	
Savings Heating Costs		$6,700,000,000
Increased sales – homes, goods		$5,600,000,000

Reduction in costs of street, highway removal of ice and snow		$375,000,000
Reduction in losses due to the absence of snowmelt floods and no hurricanes		$6,900,000,000
Income from increased construction and related employment		$475,000,000
Reduced operating costs to airlines and trucking		$167,500,000
TOTAL	**$4,350,000,000**	**$19,750,000,000**

NOTE: Ironically, in weak El Ninos, the picture may be different. In weak El Nino winters, you still get an increased number of storms but without as much added warmth. The result is that there can be heavy snowstorms instead of rains in the big cities of the east, with major (billion dollar) impact on the economy.

LA NINAS ON THE OTHER HAND...

In La Nina, the picture is very different from that of El Nino. When periodic outbreaks of extreme cold weather and snow occur across the northern states, the costs of heating, snow removal, fuel for airline and trucking industries can become at least regionally significant. If ice storms occur across the south or east, business may be shut down for days with major effects on commerce. Retail sales may be down due to travel difficulties. Construction work will be hampered with delays and loss of employment.

Also in La Ninas, losses from springtime flooding and from summer droughts and hurricanes typically are much greater than normal. Flooding in La Nina years averages nearly $4.5 billion compared to an average of $2.4 billion. Hurricane related losses in La Nina years average $5.9 billion compared to an average of $3 billion.

Take for example the 1998/99 La Nina. Hurricanes Bonnie, Georges, Dennis, Floyd, Irene and Harvey made landfall in the two summers with well over $13 billion in damages. Major tornado outbreaks occurred in January 1999 in Arkansas and Tennessee and in May in Oklahoma and Kansas with $2.3 billion in damages. The summer of 1999's heat wave and drought in the east central states added over $1 billion in losses. The total losses from La Nina related storms and lack of storms in 1998 and 1999 exceeded $16 billion.

A heat wave and drought in the La Nina summer of 1996 was responsible for $5 billion in losses in the south central states. A major heat wave and drought in the strong La Nina of 1988 caused an estimated $40 billion in damage or losses (mostly agricultural) in the central and eastern United States.

On the other hand, the winter sports industry may benefit in the west and north from increased snowfall. Warmer than normal temperatures in the big cities of the east and

south may save consumers there billions through reduced heating costs. Tourism in 'escape' destinations like Florida and California is usually up. Sales of snow removal equipment and winter clothing are also higher. But the benefits could easily be dwarfed by the losses.

So if indeed the PDO has flipped (Great Pacific Climate Shift II) and the Atlantic stays warm for another decade or more as history and Dr. Gray expect, look for

(1) More frequent La Ninas than El Ninos like we saw in the last cold phase from 1947 to 1977

(2) With more La Ninas than El Ninos, declining global temperatures with more global extremes regionally and intreaseasonal

(3) More Atlantic hurricanes threatening the east coast from Florida north, especially as long as the Atlantic stays warm (Atlantic usually lags up to a decade or so after the Pacific in its multidecadal cycles).

(4) More tornado outbreaks in the fall through the spring months.

(5) Dry winters and early springs in Florida with spring brush fires

(6) More cold and snow across the northern tier from the Pacific Northwest and Northern plains to the Great Lakes and Northern New York and New England

(7) More winters with below normal snow Mid-Atlantic south (with the exception years in the occasional usually weaker El Nino

(8) Greater chances of drought in the southwest and parts of the Corn Belt

This La Nina winter, true to form, we have experienced more snow across the northern tier (we will set a seasonal snowfall record in places like Madison this month), extremes of global cold and snow (a new January record in the satellite era), and tornado outbreaks in January and February.

SUMMARY

La Ninas produce more winter cold and snows, more severe weather from fall through spring, enhanced landfall hurricane threats, more springtime flooding and summer droughts and heat waves with greater economic impact. Given the flip of the Pacific mode to the cold PDO which favors more La Ninas like this one, we may be looking back at recent decades as the good old days when weather was unusually benign and favorable.