

The Coastal Waters Consortium Presents:

Scientist Spotlight



Dr. Dubravko Justic

What is your educational background?

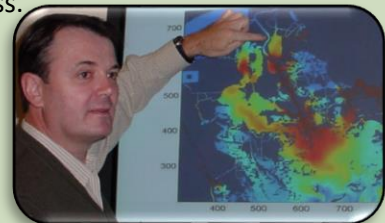
I got my undergraduate degree in biology from the University of Zagreb (Croatia) and went on to receive a Ph.D. in biological oceanography from the same university.

What inspired you to become a scientist?

I grew up on an island in the Adriatic and was fascinated by the sea since my early childhood. I spent many days and nights working as a helper on fishing boats. My old fishermen friends who were complaining about the increasing incidence of “mare sporco” and declining catch sparked my interest in the protection of marine resources. I was also profoundly influenced by my parents. My father who was an avid gardener and amateur naturalist taught me to love and respect the nature. My mother who was a school teacher taught me the daily discipline of studying hard and treating knowledge as an ultimate wealth.

Can you describe what you enjoy the most about conducting scientific research?

I guess the excitement and exuberance of problem solving. I often work in large teams composed of biologists, geologists, mathematicians, modelers and computer scientists. It is amazing how much energy and intellectual curiosity can be derived from not knowing exactly what the other team members are doing. There is also an internal comradery and competition in these teams. Charles Darwin (who was a naturalist and geologist) said that “a mathematician is a blind man in a dark room looking for a black cat which isn't there.” Is it possible to get all those disparate professionals to work together as a team? Yes, and it is priceless.



What is your role as a scientist for CWC?

I am a member of the modeling team that is developing and testing a coupled hydrodynamics-wave-sediment modeling system capable of simulating oil slick movement, oil-particle interactions and oil deposition/resuspension in deltaic Louisiana estuaries.

Can you summarize your oil spill research and describe any surprising findings you have come across?

Our model results indicated that the entrainment of oil into the anticyclonic gyre that formed in the Louisiana Bight region to west of the Mississippi River delta was the likely mechanism by which oil was transported into the Barataria Bay in the aftermath of the Deepwater Horizon spill. This result is supported by the available SAR imagery of near-shore oil slicks.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.