

GREAT DECISIONS

GDTV 2005 TRANSCRIPT *The Looming Global Water Crisis*

Host:

Dr. Peter Krogh

Dean Emeritus, Edmund Walsh School of Foreign Service, Georgetown University

Guest:

Dr. Peter Gleick

President, Pacific Institute

Brian Richter

Director, Fresh Water Initiative, The Nature Conservancy

>> 2.7 BILLION PEOPLE WORLDWIDE ARE LIKELY TO FACE SEVERE WATER SHORTAGES WITHIN 25 YEARS. ACCESS TO FRESH WATER ALREADY IS AT THE ROOT OF CONFLICTS IN THE WORLD. COULD IT BECOME THE ROUTE TO INTERNATIONAL COOPERATION? THE LOOMING GLOBAL WATER CRISIS, COMING UP NEXT ON "GREAT DECISIONS 2005."

>> "GREAT DECISIONS" IS PRODUCED BY THE FOREIGN POLICY ASSOCIATION IN ASSOCIATION WITH GEORGETOWN UNIVERSITY'S WALSH SCHOOL OF FOREIGN SERVICE. FUNDING FOR "GREAT DECISIONS" IS PROVIDED BY THE STARR FOUNDATION, MORSE FAMILY FOUNDATION, THE WILLIAM AND KAREN TELL FOUNDATION, AND CITIGROUP PRIVATE BANK.

AND NOW FROM OUR WASHINGTON, DC, STUDIO, HERE IS PETER KROGH.

>> WATER, AS THE ANCIENT MARINER OBSERVED, IS EVERYWHERE, BUT AS IT TURNS OUT, THERE IS LESS AND LESS TO DRINK. ONLY ABOUT 2% OF THE EARTH'S TOTAL SUPPLY OF WATER IS FRESH WATER USED FOR HUMAN CONSUMPTION, IRRIGATION, AND OTHER VITAL NEEDS. OF THAT 2%, JUST 1% IS AVAILABLE TO US FROM LAKES, RIVERS, AND

UNDERGROUND SOURCES. THE REST IS LOCKED AWAY IN POLAR ICECAPS. THE UNITED NATIONS PREDICTS THAT BY THE YEAR 2025, UP TO 2/3 OF THE WORLD'S POPULATION COULD LIVE IN WATER-SCARCE REGIONS, AS FRESH WATER CONSUMPTION RISES AT A RATE NEARLY DOUBLE THAT OF POPULATION GROWTH.

IT IS NOT SURPRISING, THEN, THAT SOME ENVIRONMENTAL EXPERTS HAVE PREDICTED THAT THE WORLD'S NEXT MAJOR RESOURCE CRISIS WILL NOT BE A GLOBAL SHORTAGE OF OIL, BUT OF WATER. ADDING TO THE EMERGING CRISIS IS THE FACT THAT 20% OF THE WORLD'S POPULATION LACKS ACCESS TO SAFE DRINKING WATER. POLLUTED DRINKING WATER ACCOUNTS DIRECTLY OR INDIRECTLY FOR 2 MILLION TO 3 MILLION DEATHS EACH YEAR, MOSTLY YOUNG CHILDREN.

IMPROVING THE QUALITY, DELIVERY MECHANISMS, AND MANAGEMENT OF THE WORLD'S WATER RESOURCES HAS BECOME AN INCREASINGLY IMPORTANT PRIORITY NOT ONLY FOR GLOBAL BODIES LIKE THE UNITED NATIONS, WHOSE MILLENNIUM DEVELOPMENT GOALS ADOPTED IN 2000 AIM TO CUT IN HALF BY 2015 THE NUMBER OF PEOPLE WHO LACK ACCESS TO FRESH WATER, BUT FOR GOVERNMENTS AND LOCAL COMMUNITIES WHO UNDERSTAND THE FAR-REACHING IMPLICATIONS OF A GLOBAL WATER CRISIS. WHERE IS WATER CURRENTLY A FLASH POINT?

HAVE SUCCESSES BEEN ACHIEVED IN WATER MANAGEMENT, AND CAN THEY BE REPLICATED? IS THERE A ROLE FOR THE PRIVATE SECTOR? CAN WATER BE TURNED FROM A SOURCE OF CONFLICT TO ONE OF COOPERATION? JOINING US TO DISCUSS THESE QUESTIONS ARE DR. PETER GLEICK, PRESIDENT OF THE PACIFIC INSTITUTE, AND BRIAN RICHTER, DIRECTOR OF THE FRESH WATER INITIATIVE AT THE NATURE CONSERVANCY. BRIAN, PETER, THANK YOU FOR JOINING US ON "GREAT DECISIONS 2005."

>> GREAT TO BE HERE, PETER.

>> ALARMS ARE SOUNDING. WHISTLES ARE BEING BLOWN. VOICES ARE BEING RAISED ABOUT AN INCREASING WATER SCARCITY, BUT, GENTLEMEN, WHAT IS THE HARD EVIDENCE THAT WATER SCARCITY IS WITH US AT PRESENT OR JUST OVER THE HORIZON? PETER?

>> WE ALREADY HAVE A WATER CRISIS IN MANY WAYS, IN MANY FORMS, IN MANY DIFFERENT PARTS OF THE WORLD. MORE THAN A BILLION PEOPLE LACK ACCESS TO CLEAN DRINKING WATER, SOMETHING WE TAKE FOR GRANTED. 2.6 BILLION PEOPLE, ALMOST HALF THE WORLD'S POPULATION, LACK ACCESS TO ADEQUATE SANITATION SERVICES, AND AS YOU MENTIONED, THE RESULT OF THAT IS TERRIBLE WATERBORNE DISEASES, 2 MILLION TO 3 MILLION DEATHS A YEAR OF PREVENTABLE

DISEASES, MOSTLY OF YOUNG CHILDREN. THAT'S JUST ONE EXAMPLE OF THE NATURE OF THE CRISIS WE ALREADY FIND OURSELVES IN.

>> BUT WHAT IS THE PHYSICAL EVIDENCE? ARE OUR RIVERS DRYING UP? ARE OUR RESERVOIRS SHRINKING? WHAT IS THE HARD PHYSICAL EVIDENCE OUT THERE THAT WE HAVE A WATER SHORTAGE? BRIAN?

>> WELL, WE'RE STARTING TO SEE SOME OF THE WORLD'S LARGEST AND GREATEST RIVERS BEGINNING TO DRY UP FOR THE FIRST TIME--THE GANGES, THE INDUS, THE COLORADO RIVER SYSTEM IN THE UNITED STATES, THE RIO GRANDE--AND AS WE ARE DRAWING MORE AND MORE WATER, PROGRESSIVELY, FROM THESE RIVERS AND STRETCHING THOSE SUPPLIES TO IRRIGATE FARM FIELDS AND TO SUPPLY WATER TO OUR GROWING CITIES, WE'RE PUTTING A REAL STRAIN ON THE AVAILABLE WATER SOURCES THAT WE HAVE.

>> WHAT ARE THE PRINCIPAL DRIVERS OF THIS WATER SCARCITY? WHERE SHOULD WE BE POINTING THE FINGER AND LOOKING FOR SOME SOLUTIONS? PETER?

>> WELL, WATER USE-- HUMANS USE WATER FOR A LOT OF DIFFERENT THINGS. WE USE IT TO FLUSH OUR TOILETS, TO COOK, FOR DRINKING, TO PRODUCE THINGS IN INDUSTRY, AND PARTICULARLY TO GROW FOOD, AND SO AS THE POPULATION GROWS, AS OUR ECONOMIES GROW, THE DEMAND FOR WATER IS EXPECTED TO CONTINUE TO GROW. THAT PUTS MORE AND MORE PRESSURE ON THE RIVERS, ON THE LAKES, ON OUR GROUNDWATER RESOURCES THAT ARE FINITE. THE WATER ON THE PLANET IS FINITE, AND THE DEMAND FOR WATER IS NOT NECESSARILY FINITE, AND IT'S THAT IMBALANCE, THAT CONFLICT BETWEEN A FINITE RESOURCE AND POTENTIALLY INCREASING DEMANDS THAT ARE PUTTING PRESSURE IN DIFFERENT PARTS OF THE WORLD.

>> AGRICULTURAL USE IS THE BIG ITEM HERE, IS IT NOT, BRIAN? I THINK ABOUT 70% OF THE WORLD'S FRESH WATER IS DEVOTED TO AGRICULTURAL PURPOSES.

>> THAT'S RIGHT. THAT'S RIGHT, AND IF YOU LOOK AT IT FROM THE STANDPOINT OF TOTAL CONSUMPTION, IT'S EVEN GREATER THAN, IN OTHER WORDS, THE AMOUNT OF WATER THAT ACTUALLY GETS USED UP IN THE PROCESS OF GROWING CROPS, AND THERE IS A REAL SERIOUS CHALLENGE IN THE WORLD OF TRYING TO MEET NOT ONLY THE GROWING WATER DEMANDS FOR DIRECT CONSUMPTION BY HUMANS, FOR DRINKING WATER AND THAT SORT OF THING, BUT ALSO, OF COURSE, AS THE HUMAN POPULATION GROWS, THE ASSOCIATED FOOD DEMAND IS GOING TO CONTINUE TO GROW, AND WE'RE IN AN INTERESTING SITUATION IN THE IMMEDIATE FUTURE WHERE THE AMOUNT OF

IRRIGABLE LANDS IS-- WE'RE COMING UP AGAINST THE END OF BEING ABLE TO EXPAND THE IRRIGATED AGRICULTURAL ACREAGE, AND SO A LOT OF THE THOUGHT-- AND WE'VE ALSO REALLY EXPENDED, PROBABLY, A LOT OF OUR POTENTIAL, IN TERMS OF USING THINGS LIKE AGRICULTURAL FERTILIZERS TO TRY TO STIMULATE THE PRODUCTIVITY OF THE AGRICULTURAL LANDS, AND SO WHAT WE'RE SEEING NOW IS, THE NEXT HOPE IS THAT WE'RE GOING TO HAVE TO START PUTTING WATER ON CROPLANDS THAT WERE PREVIOUSLY ONLY IRRIGATED BY NATURAL RAINFALL, AND THAT IS GOING TO INCREASE THE DEMANDS OVERALL IN THE GLOBE FOR WATER DEMAND ASSOCIATED WITH AGRICULTURE.

>> AND MEANWHILE, WE HAVE BURGEONING INDUSTRIALIZATION IN SOME VERY BIG COUNTRIES. WHAT KIND OF PRESSURE IS CHINA-- FOR EXAMPLE, PETER--PLACING UPON THE WORLD'S WATER RESOURCES TODAY?

>> WELL, INCREASINGLY, CHINA IS REALLY FINDING ITSELF UP AGAINST THE WALL, IN TERMS OF WATER. IN NORTHERN CHINA, ESPECIALLY, AROUND BEIJING AND THE REGION SURROUNDING THAT, THEY'RE ALREADY OVERDRAFTING THEIR GROUNDWATER.

THEY'RE USING UP THE RIVER WATER. MUCH OF THE RIVER WATER IS POLLUTED AND, HENCE, MADE UNUSABLE FOR HUMAN USE, AS WELL. THEY ARE ALREADY BEGINNING TO LIMIT THE KINDS OF INDUSTRIES THAT THEY DEVELOP AROUND THE BEIJING AREA. THEY'RE PUTTING CONSTRAINTS ON PHARMACEUTICAL INDUSTRIES AND TEXTILE INDUSTRIES AND LARGE, WATER-CONSUMING INDUSTRIES AND SAYING, "LOOK. WE JUST DON'T HAVE THE WATER TO SUPPORT THESE INDUSTRIES HERE. WE HAVE TO PUT THEM SOMEWHERE ELSE, OR WE HAVE TO GO TO WORLD MARKETS FOR THESE KINDS OF THINGS."

WHEN WE FIND OURSELVES CONSTRAINED, INDUSTRIAL AND IN TERMS OF HUMAN HEALTH AND IN TERMS OF ECOSYSTEMS, BY THE AMOUNTS OF WATER THAT ARE AVAILABLE, I THINK THAT'S AN INDICATION OF THE SEVERITY OF THE PROBLEM.

>> YEAH.

>> WHAT ARE THE PRINCIPAL CONSEQUENCES OF THIS PROBLEM THAT SHOULD CAUSE US THE GREATEST CONCERN? WHAT ARE WE SEEING OUT THERE THAT IS DIRECTLY TIED TO WATER SCARCITY THAT OUGHT TO REALLY BOTHER US?

BRIAN?

>> WELL, PETER, YOU'VE ALREADY TOUCHED ON SOME OF THE REAL SERIOUS ISSUES FOR HUMANITY, WHICH ARE JUST SIMPLY LACKING THE ACCESS TO CLEAN, SAFE DRINKING-WATER SUPPLIES--

>> AND THE HUMAN TOLL ASSOCIATED WITH THAT.

>> AND THE HUMAN TOLL ASSOCIATED WITH THAT. A LOT OF OUR WORK HAS BEEN ALSO FOCUSED ON THE FACT THAT AS WE INCREASINGLY DRAW WATER FROM THESE FRESHWATER ECOSYSTEMS--FROM THE STREAMS, THE RIVERS, THE LAKES--AND INCREASINGLY DEplete THOSE WATER RESOURCES, THAT IT'S ALSO CAUSING PROBLEMS FOR A NUMBER OF OTHER VALUES, PRODUCTS, SERVICES THAT HUMAN SOCIETY IS VERY DEPENDENT UPON, SUCH AS THE AVAILABILITY TO SUPPORT COMMERCIAL FISHERIES OR SIMPLY TO PROVIDE HEALTHY, SAFE, AND ADEQUATE RECREATIONAL AREAS FOR OUR KIDS TO BE ABLE TO GET OUT IN THE RIVER DURING A HOT SUMMER DAY AND PLAY.

AS WE'RE DRYING UP THE RIVERS, WE'RE STARTING TO LOSE A LOT OF THOSE THINGS THAT WE TOOK FOR GRANTED FOR SO LONG.

>> DON'T LOOK NOW, BUT THERE'S NO RIVER.

>> RIGHT.

>> IF I COULD ADD TO THAT, ANOTHER WAY THAT THESE PROBLEMS MANIFEST THEMSELVES IS POLITICAL. WATER IS A VERY POLITICAL ISSUE. IT'S A SOCIAL VALUE. IT'S AN ECONOMIC VALUE. IN A PHYSICAL SENSE, MOST OF THE WORLD'S WATER IS SHARED BY MORE THAN ONE COUNTRY. RIVERS ARE MULTINATIONAL. THERE ARE ALMOST NO GREAT RIVERS IN THE WORLD THAT DON'T CROSS BORDERS...

>> INCLUDING OUR OWN.

>> INCLUDING MANY OF OUR OWN. IN FACT, THE COLORADO IS SHARED BY 7 STATES IN THE U.S., BUT WE ALSO HAVE A TREATY ON THE COLORADO WITH MEXICO. THE RIO GRANDE THAT BRIAN MENTIONED ALREADY--THE NILE IS SHARED BY 10 NATIONS. IT'S NOT JUST AN EGYPTIAN RIVER, AND WE'RE INCREASINGLY FINDING POLITICAL DISPUTES AND POLITICAL CONFLICTS OVER THE ALLOCATIONS AND THE USE OF THOSE WATER RESOURCES, OVER THE ECONOMICS AND THE QUALITY OF THE RIVERS THAT CROSS BORDERS, AND I THINK OUR POLITICAL SYSTEM IS NOT ADEQUATELY PREPARED TO DEAL WITH THAT.

>> WHERE HAS WATER FIGURED RATHER PROMINENTLY IN ACTUAL CONFLICTS, WHETHER THEY'RE REGIONAL OR INTERNAL CONFLICTS? WHAT ARE THE BEST CONTEMPORARY EXAMPLES, PETER?

>> INTERESTINGLY, THERE ARE EXAMPLES THAT GO BACK THROUGH HISTORY TO 3000 B.C...

>> I'VE READ YOUR CHRONOLOGY ON THIS. IT'S VERY INTERESTING.

>> AND PERHAPS THE MOST CLASSIC EXAMPLE IS THE MIDDLE EAST. THE MIDDLE EAST HAS BEEN A SOURCE OF TENSION OVER WATER FOR THOUSANDS OF YEARS, IN PART BECAUSE, FIRST, IT'S VERY WATER-SCARCE.

SECOND, THERE ARE TENSIONS AND CONFLICTS IN THE MIDDLE EAST OVER A LOT OF OTHER THINGS, AS WELL, AND SO WATER IS A CONTRIBUTING FACTOR TO THAT, BUT THE TIGRIS AND THE EUPHRATES GOES FROM TURKEY TO SYRIA TO IRAQ. THE JORDAN RIVER IS SHARED BY JORDAN AND ISRAEL AND THE PALESTINIANS AND LEBANON. EVERY MAJOR RIVER IS SHARED, AND THERE'S A LONG HISTORY OF DISPUTES OVER THOSE RESOURCES.

>> BUT ACTUALLY, HAVEN'T WE SEEN SOME GOOD EVIDENCE OF COOPERATION IN THIS REGION, ALSO? THERE'S SOMETHING CALLED THE NILE BASIN INITIATIVE, WHICH THE WORLD BANK SPONSORED. APPARENTLY JORDAN AND ISRAEL ARE DOING A REASONABLY GOOD JOB OF COOPERATING IN THE WATER AREA.

I MEAN, DO WE HAVE SOME THINGS THAT WORK, BRIAN, OUT THERE, WOULD YOU SAY?

>> THERE ARE SOME GOOD EXAMPLES EMERGING, AND THERE'S SOME REASON FOR HOPE. THERE IS A LARGE INITIATIVE ON THE DANUBE RIVER, FOR EXAMPLE, IN EUROPE WHERE THE COUNTRIES ARE COMING TOGETHER AND ACTING IN THE MUTUAL INTEREST OF ALL OF THE COUNTRIES TOGETHER AND REALLY TAKING SOME VERY AGGRESSIVE MEASURES TO TRY TO IMPROVE UPON, OR TO TRY TO RECTIFY, SOME OF THE DEGRADATION THAT'S OCCURRED, FOR EXAMPLE,

WITH WATER QUALITY, A LOT OF POLLUTION THAT'S ENTERED INTO PLACES LIKE THE DANUBE. THERE ARE ALSO SOME GOOD EXAMPLES HERE WITHIN THE UNITED STATES, WHERE WE HAVE A PRETTY GOOD HISTORY, NEARLY 50 YEARS, OF WORKING IN INTERSTATE WATER COMPACT NEGOTIATIONS, SUCH AS IN THE DELAWARE RIVER BASIN COMMISSION IN THE NORTHEASTERN UNITED STATES.

>> BUT WE ARE SURELY ONE OF THE WORLD'S MOST PROFLIGATE USERS OF WATER, AND IF WE STAY ON OUR PRESENT COURSE, WHERE DO WE END UP? DO WE END UP THIRSTY, TOO?

PETER?

>> WELL, THE UNITED STATES USES A LOT OF WATER. WE USE, PROBABLY, MORE WATER PER PERSON THAN ANY OTHER COUNTRY. THERE MAY BE A FEW OTHERS THAT USE MORE, BUT WE DO A LOT OF THINGS WITH THAT WATER, AND I ACTUALLY THINK ONE OF THE CHALLENGES FACING US IS TO FIGURE OUT HOW TO DO THE THINGS THAT WE WANT TO DO WITH LESS WATER, HOW TO GROW MORE FOOD WITH THE WATER WE'RE ALREADY USING OR TO MEET THE DEMANDS THAT WE HAVE TO PRODUCE THINGS, TO COOK, TO CLEAN, TO GET RID OF HUMAN WASTES MORE EFFICIENTLY WITH LESS AND LESS WATER.

THE ASSUMPTION THAT AS POPULATIONS GROW AND AS THE ECONOMY GROWS THAT THE DEMAND FOR WATER IS GOING TO HAVE TO GROW IS AN ASSUMPTION WE'VE MADE, BUT I THINK IT'S NOT NECESSARILY TRUE, AND IN FACT, IN THE UNITED STATES, WE'RE ALREADY BECOMING MORE EFFICIENT. WE'RE ALREADY LEARNING HOW TO DO THE THINGS WE WANT TO DO WITH LESS WATER AND CUTTING OUR DEMAND, AND I THINK THAT'S AN IMPORTANT COMPONENT OF SOLUTIONS FOR THE FUTURE.

>> WELL, THIS IS VERY GOOD NEWS. SHOULD WE ALSO BE LOOKING, BRIAN, TO TECHNOLOGY TO COME TO THE RESCUE? I DON'T KNOW WHETHER THE WORLD OUGHT TO BE MAKING GREATER OR LESSER USE OF DESALINIZATION, FOR EXAMPLE.

>> WELL, I THINK I'LL LET PETER SPEAK TO THAT PARTICULAR TOPIC BECAUSE PETER HAS BEEN DOING A LOT OF RESEARCH ON DESALINIZATION--DESALINATION-- BUT THERE CERTAINLY IS QUITE A BIT OF IMPROVEMENT, PARTICULARLY IN THE INDUSTRIAL SECTOR, WHERE THERE'S BEEN SOME VERY SIGNIFICANT IMPROVEMENTS IN THE TECHNOLOGY. THEY'RE USING, YOU KNOW, IN SOME CASES, A TENTH OF THE WATER THAT THE INDUSTRIAL PROCESSES USED TO USE PREVIOUSLY, AND, PETER, DO YOU WANT TO ADDRESS THE DESAL ISSUES?

>> SURE. TECHNOLOGY IN GENERAL IS AN IMPORTANT PART OF THIS, ALTHOUGH ULTIMATELY, THE SOLUTIONS WILL BE TECHNOLOGICAL AND ECONOMIC AND BEHAVIORAL. IN TECHNOLOGY, THERE ARE ALL SORTS OF THINGS THAT PERMIT US TO USE WATER MORE EFFICIENTLY. SMALL-SCALE DRIP IRRIGATION IS SOMETHING THAT HAS GREAT PROMISE FOR AGRICULTURE, WHICH IS A BIG CONSUMER OF WATER.

AS BRIAN MENTIONED, IN OUR INDUSTRIAL PROCESSES, WE'RE CUTTING WATER USE AND KEEPING PRODUCTION HIGH. DESALINATION, WHICH

OFFERS US THE ABILITY TO TAP INTO THIS OTHER 98% OF THE WORLD'S WATER THAT YOU MENTIONED AT THE BEGINNING--THE OCEANS, IN PARTICULAR--IS A TECHNOLOGY WE UNDERSTAND. WE DESALINATE WATER. WE KNOW HOW TO TAKE SALT OUT OF WATER...

>> BUT MEANWHILE, WE'RE PUMPING CO2 INTO THE AIR AND MAYBE CONTRIBUTING TO GLOBAL WARMING.

>> BUT IT'S ENERGY-INTENSIVE, WHICH CONTRIBUTES TO THE CLIMATE PROBLEM, AND IT'S STILL PRETTY EXPENSIVE. SO I THINK DESALINATION HAS A ROLE TO PLAY IN THE FUTURE, BUT NOT AS BIG A ROLE YET AS I THINK SOME MIGHT HOPE.

>> BEFORE WE LEAVE THE U.S., HOW VULNERABLE ARE OUR WATER SOURCES TO TERRORIST ATTACK, WOULD YOU SAY?

>> WE'VE ACTUALLY DONE SOME WORK AT THE NATIONAL ACADEMY OF SCIENCES ON THIS, LOOKING--IN RECENT YEARS, AS ONE MIGHT EXPECT--AT WHAT THE RISKS ARE AND WHAT ONE MIGHT DO. I THINK THEY'RE VULNERABLE. I THINK THERE ARE THINGS THAT WE COULD BE DOING MUCH BETTER TO PROTECT OUR WATER RESOURCES. I DON'T NECESSARILY THINK THEY'RE LIKELY TO BE THE HIGHEST-PRIORITY TARGETS, ALTHOUGH ONE NEVER KNOWS, BUT WATER IS SO IMPORTANT TO US THAT I THINK IT BEHOOVES US TO PAY MORE ATTENTION TO THE SECURITY OF OUR WATER.

>> IS THE HOMELAND SECURITY DEPARTMENT DOING THAT, PETER, AS FAR AS YOU KNOW?

>> UH, I'M NOT NECESSARILY PRIVY TO ALL THAT THEY'RE DOING, BUT I WOULD HOPE SO. YES.

>> AND CERTAINLY, A LOT OF THE LOCAL WATER MUNICIPALITIES, WATER AUTHORITIES, AND THAT SORT OF THING HAVE GONE THROUGH PRETTY EXTENSIVE ASSESSMENTS OF THEIR VULNERABILITIES AND PUT INTO PLACE SOME ADDITIONAL SECURITY MEASURES AND THAT SORT OF THING.

>> I THINK THEY'RE PAYING MORE ATTENTION.

>> THEY'RE PAYING MORE ATTENTION. SO A LOT OF THE ACTIVITY IS GOING ON ON A VERY LOCAL SCALE FOR LOCAL WATER-SUPPLY SYSTEMS.

>> BRIAN AND PETER, SURELY, THERE SHOULD BE ENOUGH WATER AROUND. I MEAN, CANADA IS JUST OVERFLOWING WITH WATER, AND SO

WHAT WE'VE GOT HERE IS, WE'VE GOT A PROBLEM OF GLOBAL DISTRIBUTION AND MANAGEMENT.

DOES THE PRIVATE SECTOR HAVE ANY ROLE TO PLAY HERE?

I KNOW THE FRENCH ARE OUT AND ABOUT MAKING MILLIONS OF DOLLARS OUT OF WATER MANAGEMENT, AND THE "VILLAGE VOICE" DOESN'T LIKE IT AND WRITES ARTICLES ABOUT IT, BUT IS THERE A ROLE FOR THE PRIVATE SECTOR HERE, BRIAN?

>> WELL, I THINK THERE MOST DEFINITELY IS. IT'S A REAL FLASH-POINT ISSUE IN THE WATER COMMUNITY THESE DAYS AS TO THE DEGREE TO WHICH WE SHOULD MAKE WATER--THAT WE SHOULD PRIVATIZE THE PROVISION OF WATER FOR HUMAN NEEDS, AND I THINK THERE ARE A COUPLE OF ISSUES THAT GET ENTANGLED UP IN THAT CONVERSATION.

ONE OF THEM HAS TO DO WITH THE FACT THAT THERE ARE MANY WHO BELIEVE THAT HUMANS HAVE A BASIC RIGHT TO WATER. I KNOW PETER HAS WRITTEN ABOUT THIS, AND IT'S CERTAINLY SOMETHING THAT WE AGREE WITH, AS WELL.

>> THAT YOU DEFINE IT AS A BASIC HUMAN RIGHT?

>> YES. THERE IS--THIS IS A DEBATE IN THE INTERNATIONAL LEGAL COMMUNITY, BUT I WOULD ARGUE--AND NOW THE U.N. HAS ARGUED QUITE COGENTLY, I THINK--THAT THERE IS A LEGAL HUMAN RIGHT TO WATER CODIFIED IN INTERNATIONAL LAW.

>> SO YOU DON'T PUT THAT RIGHT IN THE HANDS OF THE PRIVATE SECTOR, THEN?

>> WELL, ONE OF THE ISSUES HAS BECOME, OF COURSE, THAT THERE ARE A LOT OF VERY, VERY POOR PEOPLE IN THE WORLD WHO MAY NOT HAVE THE FINANCIAL RESOURCES TO BE ABLE TO PAY FOR WATER, AND SO WE ARE CERTAINLY GOING TO HAVE TO ADDRESS SOME OF THOSE INEQUITIES IN THE ABILITY TO PAY, THE AFFORDABILITY OF WATER.

>> SO YOU COULD HAVE A TWO-TIERED PRICING SYSTEM, THEN. YOU COULD HAVE SUBSIDIES FOR POOR PEOPLE, AND THE RICH PEOPLE WHO TAKE TOO MANY SHOWERS, THEY COULD PAY MORE FOR WATER.

>> WELL, AND INDEED, WE DO. MOST OF OUR WATER DISTRICTS IN THE UNITED STATES INCREASING HAVE MULTITIERED SYSTEMS WHERE THE LOWEST AMOUNT OF WATER IS PAID FOR AT A RELATIVELY LOW PRICE, AND THE MORE YOU USE, THE MORE EXPENSIVE IT IS, AND THAT'S AN INCENTIVE TO CONSERVATION, AS WELL, BUT THERE IS A ROLE, I THINK,

FOR THE PRIVATE SECTOR IN OPERATING AND MAINTAINING SYSTEMS, IN SOME ASPECTS OF WATER PROVISION, BUT IT IS IMPORTANT THAT GOVERNMENTS MAINTAIN REGULATORY OVERSIGHT OF THAT.

WATER IS AN ECONOMIC GOOD, BUT IT'S ALSO A SOCIAL AND PUBLIC GOOD, AND WATER PROVISION IS A MONOPOLY, AND, AS WE'VE LEARNED TO OUR DETRIMENT IN MANY AREAS, IF WE DON'T HAVE GOVERNMENT OVERSIGHT OF MONOPOLIES, THEN THERE'S ABUSE, AND SO BALANCING THE PUBLIC AND PRIVATE INTERESTS IN THIS IS A CHALLENGE THAT WE'RE STILL WRESTLING WITH.

>> PERIODICALLY, WE PLUNGE OURSELVES INTO WATER RATIONING. WELL, AT LEAST IN CALIFORNIA, YOU DO.

>> WELL, BECAUSE OF DROUGHT, ESPECIALLY.

>> WELL, BUT DOES SOME OVERALL SCHEME OF WATER RATIONING MAKE SENSE TO PUT IN PLACE FOR THE LONG HAUL, EVEN IN THIS COUNTRY, WITH OR WITHOUT DROUGHT?

>> I THINK THE BEST APPROACH IS TO LET PEOPLE FIGURE OUT HOW TO MEET THEIR NEEDS WITH AS LITTLE WATER AS POSSIBLE. MANDATORY RATIONING IS THE LAST KIND OF THING YOU WANT TO DO. INSTEAD, YOU WANT TO PROVIDE TECHNOLOGY AND ECONOMIC INCENTIVES, APPLIANCE EFFICIENCY STANDARDS SO THAT THE APPLIANCES THAT WE USE WITH WATER, WASHING MACHINES AND DISHWASHERS AND TOILETS, ARE AS EFFICIENT AS POSSIBLE AND LEAVE RATIONING TO THOSE RARE SITUATIONS WHEN EITHER TEMPORARILY BECAUSE OF DROUGHT, THERE'S A SHORT-TERM SHORTAGE OR THERE ARE NO OTHER...

>> OR JUST APPLY IT TO CALIFORNIA AND THEN LET THE REST OF US GO AHEAD AND TAKE OUR SHOWERS.

>> WELL, I LIVE IN CALIFORNIA. I HAVE TO SAY, IN MANY WAYS, CALIFORNIA HAS PLENTY OF WATER, IF WE CAN FIGURE OUT HOW TO ALLOCATE IT PROPERLY.

>> AND THERE ARE TWO LEVELS TO THIS, PETER, AS PETER HAS TOUCHED UPON. THERE'S THE IDEA THAT YOU NEED TO BE AS EFFICIENT AND AS CAREFUL AND AS CONSERVATIVE WITH YOUR WATER USE OVER THE LONG TERM. THERE'S ALSO THE ISSUE OF THE SHORT-TERM CRISIS, IF YOU WILL.

WHEN WE MOVE INTO A SEVERE DROUGHT CONDITION, THERE ARE GOING TO BE PARTICULAR STRAINS ON THE EXISTING WATER SUPPLIES, AND DURING THOSE TIMES, WE HAVE TO HAVE THE FLEXIBILITY TO BE

ABLE TO IMPLEMENT SOME SHORT-TERM HIGHER LEVELS OF CONSERVATION.

IN OTHER WORDS, THE HUMAN SOCIETY HAS TO BE ABLE TO FLUCTUATE, OR VARY, OUR DEMAND TO SOME DEGREE IN SYNCHRONY WITH THE AVAILABLE SUPPLY, AND WE'VE SEEN SO MANY COMMUNITIES THAT TAKE A DIFFERENT TACK WHERE THEY WILL TRY TO BUILD RESERVOIR STORAGE TO BE ABLE TO GET THEM THROUGH THE VERY WORST DROUGHT CONDITIONS, AND IF YOU DO THAT,

IT TENDS TO BE NOT A VERY ECONOMICALLY EFFICIENT APPROACH BECAUSE YOU END UP HAVING TO BUILD SO MUCH STORAGE AT SUCH AN EXPENSIVE COST, WHEREAS BY IMPLEMENTING SHORT-TERM CONSERVATION MEASURES, YOU CAN GET THROUGH SOME OF THOSE CRITICAL PERIODS WITHOUT HAVING TO HAVE THAT VERY, VERY LARGE AMOUNT OF STANDING SUPPLY.

>> PETER, IF YOU LOOK AROUND THE WORLD, PARTICULARLY IN THE IMPOVERISHED COUNTRIES AND THE FAILED STATES, WHAT YOU OFTEN SEEM TO SEE IS WATER SCARCITY, KIND OF POVERTY, DISPLACEMENT AND MIGRATION OF PEOPLE LOOKING FOR WATER SO THEY CAN KIND OF FEED THEMSELVES, AND THEY RUN INTO ANOTHER TRIBE WHO IS SITTING ON THAT SAME LAND, AND YOU GET CONFLICT, AND YOU GET FAILED STATES. SO WATER IS RIGHT IN THE MIDST OF THIS, PARTICULARLY IN THOSE COUNTRIES THAT HAVE CLIMATIC CONDITIONS CONDUCIVE TO WATER SCARCITY AND ALSO HAVE SUFFERED FROM DEFORESTATION, RIGHT?

>> THERE IS A REMARKABLE, NOT FULLY UNDERSTOOD CONNECTION BETWEEN ENVIRONMENTAL ISSUES AND WATER ISSUES AND INTERNATIONAL POLITICS AND SECURITY...

>> AND FAILED STATES.

>> AND FAILED STATES. INCREASINGLY, WE ARE SEEING TENSIONS, DISPUTES THAT THE INTERNATIONAL COMMUNITY IS HAVING TO DEAL WITH THAT ARE THE RESULT OF FAILED STATES THAT ARE THEMSELVES THE RESULT OF RESOURCE OR ENVIRONMENTAL SCARCITY OR CONTAMINATION OR DEGRADATION. SOME OF THOSE ARE WATER-RELATED.

I THINK WE HAVE TO MEET BASIC HUMAN NEEDS FOR WATER FOR ALL. WE HAVE TO DO IT EFFICIENTLY, AND WE HAVE TO DO IT QUICKLY, AND THE CONNECTION BETWEEN SATISFYING THOSE NEEDS AND REDUCING POVERTY AND REDUCING ILL HEALTH AND INCREASING ECONOMIC

PRODUCTIVITY, I THINK THOSE LINKS ARE STRONG AND REALLY NEED TO BE BETTER MANAGED BY THE WORLD COMMUNITY.

>> HOW HIGH A PRIORITY, BRIAN, IS THIS FOR THE UNITED NATIONS AND FOR THE UNITED STATES? I KNOW THE UNITED NATIONS HAS ITS MILLENNIUM AGENDA, ADOPTED IN THE YEAR 2000, AND IT WANTS TO HALVE THE NUMBER OF PEOPLE FACING WATER SCARCITY BY THE YEAR 2015.

>> RIGHT.

>> THE U.S. HAS SOMETHING CALLED THE MILLENNIUM CHALLENGE ACCOUNT. I DON'T KNOW WHETHER THERE IS A WATER CRITERION THERE FOR THOSE WHO WANT TO TAP INTO THAT ACCOUNT. THAT IS, THEY WOULD HAVE TO PROVE THAT THEY HAVE A GOOD WATER-MANAGEMENT PROGRAM. IS THE U.S. ONTO THIS?

>> WELL, THEY ARE, AND THERE'S A COUPLE OF DIFFERENT DIMENSIONS TO IT.

ONE IS THE FACT THAT AS WE HAVE THESE GROWING MUNICIPAL CENTERS--CITY OF ATLANTA, LOS ANGELES, LAS VEGAS-- THEY'RE EXHAUSTING THEIR LOCAL WATER-SUPPLY SYSTEMS, AND THEN THEY'RE INCREASINGLY REACHING THE STRAWS OUT FURTHER AND FURTHER. THAT HAS CONSEQUENCES ON TWO DIFFERENT LEVELS.

ONE IS, IT'S SIMPLY THEY'RE, IN ESSENCE, MOVING INTO SOMEBODY ELSE'S HOME WATER SUPPLY, AND THERE'S AN ISSUE ABOUT WHETHER OR NOT THAT IMPINGES UPON THE FUTURE POSSIBILITIES, ECONOMIC VIABILITIES OF THOSE ADJACENT STATES OR COMMUNITIES. THE OTHER PROBLEM THAT WE'VE DONE A LOT OF RESEARCH ON HAS TO DO WITH THE FACT THAT THE ECOLOGICAL FOOTPRINT OF THAT GROWING WATER DEMAND AND REACHING OUT THE TENTACLES FURTHER AND FURTHER INTO FURTHER AND FURTHER DISTANT WATERSHEDS THEN EXTENDS THE ECOLOGICAL CONSEQUENCES OF THAT WATER-DEVELOPMENT ACTIVITY FURTHER AND FURTHER AWAY.

SO YOU HAVE CITIES LIKE NEW YORK CITY OR LOS ANGELES THAT ARE GOING HUNDREDS OF MILES AWAY INTO RIVERS THAT ARE BEING OTHERWISE FAIRLY LIGHTLY UTILIZED BY THOSE LOCAL COMMUNITIES, BUT YOU'RE HAVING SEVERE ECOLOGICAL IMPACTS BECAUSE THE BIG CITIES ARE DRAWING WATER IN FROM A LONG DISTANCE.

>> RIGHT. WELL, LAS VEGAS IS A STORY ALL ON ITS OWN, RIGHT? I MEAN, IT'S THE FASTEST-GROWING PLACE IN AMERICA AND TAPPING INTO--I DON'T KNOW WHAT IT TAPS INTO.

>> THE COLORADO RIVER.

>> OH. I MEAN, THERE ISN'T A GREAT ICE-AGE WATER TABLE BENEATH LAS VEGAS AND THOSE CASINOS?

>> THEY ARE MOVING, AS BRIAN SAYS, THEIR TENTACLES FURTHER OUT TO GROUNDWATER BASINS.

>> BUT, PETER, HOW ABOUT THIS BUSINESS OF WATER ON THE U.S. FOREIGN-POLICY RADAR SCREEN AND OUR DEVELOPMENT RADAR SCREEN? IS THAT RATHER SECURELY THERE?

>> I WOULD ARGUE THAT THE U.S. HAS NO COHERENT NATIONAL WATER POLICY OR INTERNATIONAL WATER POLICY. WE'RE NOT DOING WHAT WE COULD BE DOING AT THE INTERNATIONAL LEVEL, AT THE LEVEL OF FUNDING, AND THE WAY OF THE FUNDING THAT WE SPEND INTERNATIONALLY IN THE WATER AREA. THE LEVEL OF FUNDING IS TOO LOW, AND WE'RE NOT SPENDING IT IN THE RIGHT PLACES IN THE RIGHT WAYS. WE'RE NOT PARTICIPATING TO THE DEGREE THAT OUR TECHNOLOGY AND OUR INCREDIBLE EDUCATIONAL RESOURCES PERMIT.

WE COULD BE A VERY INFLUENTIAL PLAYER ON THE INTERNATIONAL WATER SCENE. WE COULD PRODUCE A LOT OF INTERNATIONAL GOODWILL. THE AMOUNT OF GOODWILL WE COULD GENERATE FOR OUR ABILITY TO SOLVE THESE PROBLEMS IS ENORMOUS, AND WE'RE NOT GETTING THE GOODWILL THAT WE COULD. IT'S, I THINK, PAST TIME THAT THE U.S. PLAYED A BIGGER ROLE IN THIS AREA.

>> AND INTERESTINGLY, THERE ARE SOME OTHER COUNTRIES THAT ARE REALLY STARTING TO JUMP OUT AHEAD OF WHERE THE U.S. IS WITH WATER POLICY.

>> I MEAN, AUSTRALIA HAS A GREAT WATER-MANAGEMENT POLICY.

>> THE JAPANESE SPEND 3 TIMES AS MUCH AS THE UNITED STATES ON WATER SUPPLY AND SANITATION FUNDING. THE NETHERLANDS, THE EUROPEAN COUNTRIES--THE U.S. IS ALMOST AT THE BOTTOM OF THE PACK WHEN IT COMES TO THE FRACTION OF OUR FOREIGN AID THAT WE DEVOTE TO WATER SUPPLY AND SANITATION.

>> AND BACK TO THIS ISSUE OF PRIVATIZATION AND HUMAN RIGHTS TO WATER AND THAT SORT OF THING, THERE'S A GREAT EXAMPLE FROM SOUTH AFRICA, WHERE AFTER THE FALL OF APARTHEID IN 1994, THEY HAD THE OPPORTUNITY TO REWRITE FUNDAMENTALLY ALL OF THEIR NATIONAL LEGISLATION, AND ONE OF THE THINGS THEY PASSED IN 1998

WAS A NEW NATIONAL WATER ACT, AND THAT NATIONAL WATER ACT CALLS FOR A RESERVE OF WATER IN EVERY RIVER BASIN TO MEET TWO PURPOSES: BASIC HUMAN RIGHTS--AND THERE'S A CERTAIN AMOUNT ALLOCATED FOR EVERY INDIVIDUAL THAT THEY WILL BE ENTITLED TO IN PERPETUITY--AND THEN SECOND, BUT EQUAL IMPORTANCE, IS THE PROTECTION OF THE RIVER AND LAKE ECOSYSTEMS THEMSELVES.

SO THOSE ARE, IN ESSENCE, INALIENABLE RIGHTS, AND IN EVERY RIVER BASIN, THAT RESERVE OF WATER IS MADE AVAILABLE FOR BASIC HUMAN USES--COOKING BATHING, DRINKING WATER--AND THE PROTECTION OF THE NATURAL ECOSYSTEMS, AND THEN ALL OTHER WATER USES FOR AGRICULTURE AND THOSE SORTS OF THINGS ARE DONE ON A RENEWABLE LICENSE BASIS. SO THERE'S SOME VERY PROGRESSIVE WATER POLICY BEING DEVELOPED IN OTHER PLACES.

>> GOOD FOR SOUTH AFRICA. WE JUST HAVE A FEW SECONDS LEFT, GENTLEMEN. KOFI ANNAN HAS TALKED ABOUT THE POSSIBILITY OF WATER SERVING AS, QUOTE, "A CATALYST FOR COOPERATION." DO YOU SEE THAT AS A POSSIBILITY, THAT THIS COULD BE THE ROUTE TO INTERNATIONAL COOPERATION OR GREATER INTERNATIONAL COOPERATION,

PETER?

>> YES, ABSOLUTELY. WE'VE SEEN UNFORTUNATE EXAMPLES WHERE WATER IS A SOURCE OF CONFLICT, BUT WE'VE ALSO SEEN MANY, MANY EXAMPLES WHERE IT'S BEEN A SOURCE OF COOPERATION. THE ISRAELIS AND THE JORDANIANS SIGNED A PEACE TREATY, AND A PIECE OF THAT PEACE TREATY IS A WATER AGREEMENT. THEY'RE RENEGOTIATING THE NILE AGREEMENT NOW TO INCLUDE ALL 10 COUNTRIES OF THE NILE. THEY'VE NEVER BROUGHT ALL THE PARTIES TO THE TABLE BEFORE. THERE ARE MANY EXAMPLES IN WHICH, IF WE GET SMART, WE CAN REALLY BRING WATER OUT OF THE AREA OF CONFLICT INTO COOPERATION.

>> SEE THIS AS A POSSIBILITY, BRIAN?

>> YES, I DO, PETER, AND ONE OF MY FAVORITE QUOTES CAME FROM A SOUTH AFRICAN WHO SAID THAT "THROUGH OUR MANAGEMENT OF WATER, WE'RE GOING TO LEARN WHAT DEMOCRACY IS REALLY GOING TO MEAN FOR OUR COUNTRY," AND I THINK THAT AS WATER BECOMES MORE AND MORE SCARCE AND THE CHALLENGES OF MANAGING IT IN AN EQUITABLE AND A SUSTAINABLE FASHION REALLY WILL BECOME A VERY IMPORTANT ELEMENT OF DEMOCRACY IN THE WORLD'S NATIONS IN THE FUTURE.

>> SO SIGNS OF HOPE.

>> SIGNS OF HOPE.

>> THANK YOU, BRIAN RICHTER, AND THANK YOU, PETER GLEICK, AND
THANK YOU, OUR AUDIENCE, FOR "GREAT DECISIONS 2005."

I'M PETER KROGH.

>> TO LEARN MORE ABOUT TOPICS DISCUSSED ON "GREAT DECISIONS,"
VISIT OUR WEB SITE AT WWW.FPA.ORG.

TO ORDER A COPY OF THE "GREAT DECISIONS" BRIEFING BOOK OR A DVD
SET OF THIS SERIES OR TO JOIN A "GREAT DECISIONS" DISCUSSION GROUP,
CONTACT THE FOREIGN POLICY ASSOCIATION.

"GREAT DECISIONS" IS PRODUCED BY THE FOREIGN POLICY ASSOCIATION.

FUNDING FOR "GREAT DECISIONS" IS PROVIDED BY THE STARR
FOUNDATION, THE MORSE FAMILY FOUNDATION, THE WILLIAM AND
KAREN TELL FOUNDATION, AND CITIGROUP PRIVATE BANK.