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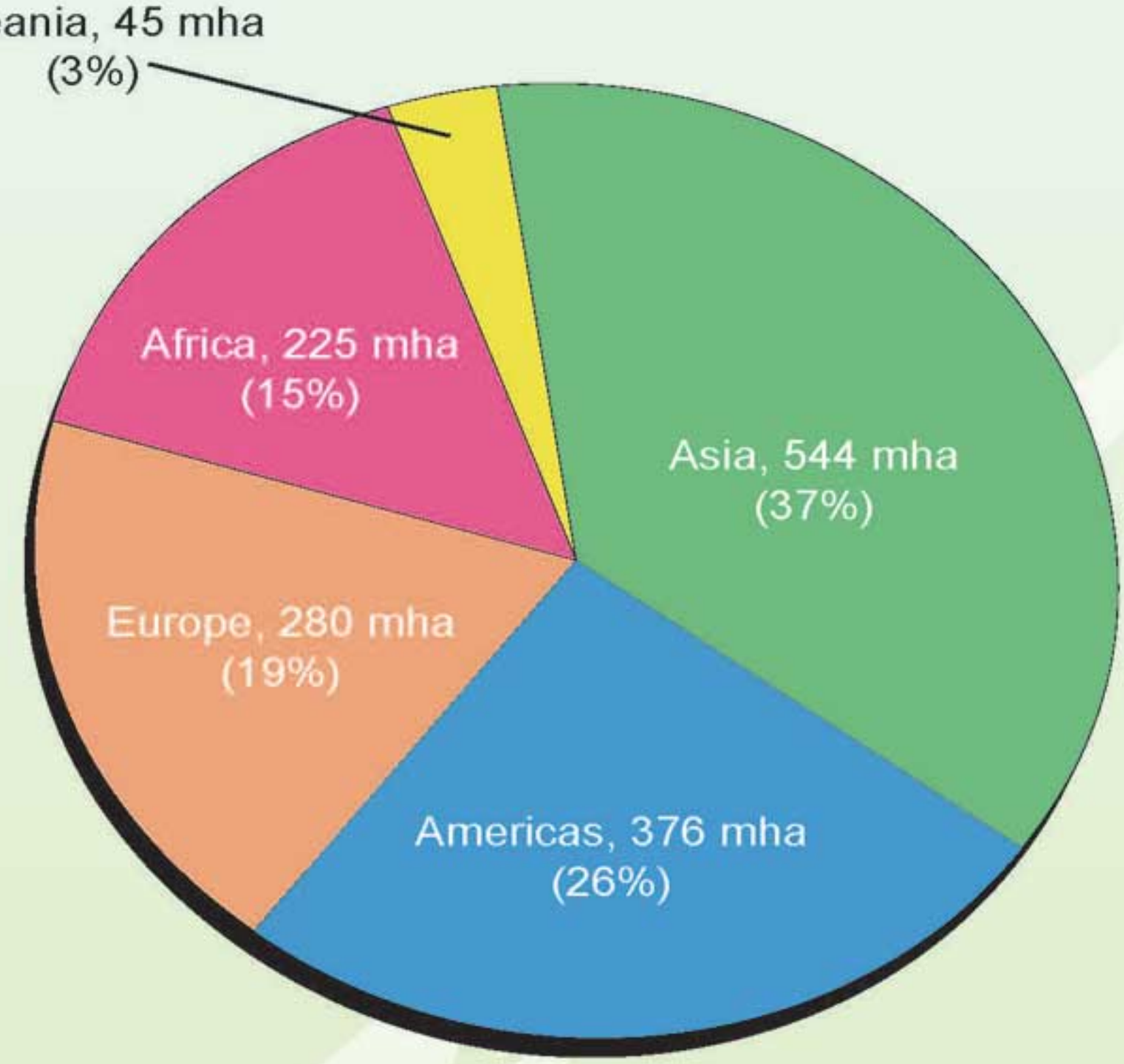
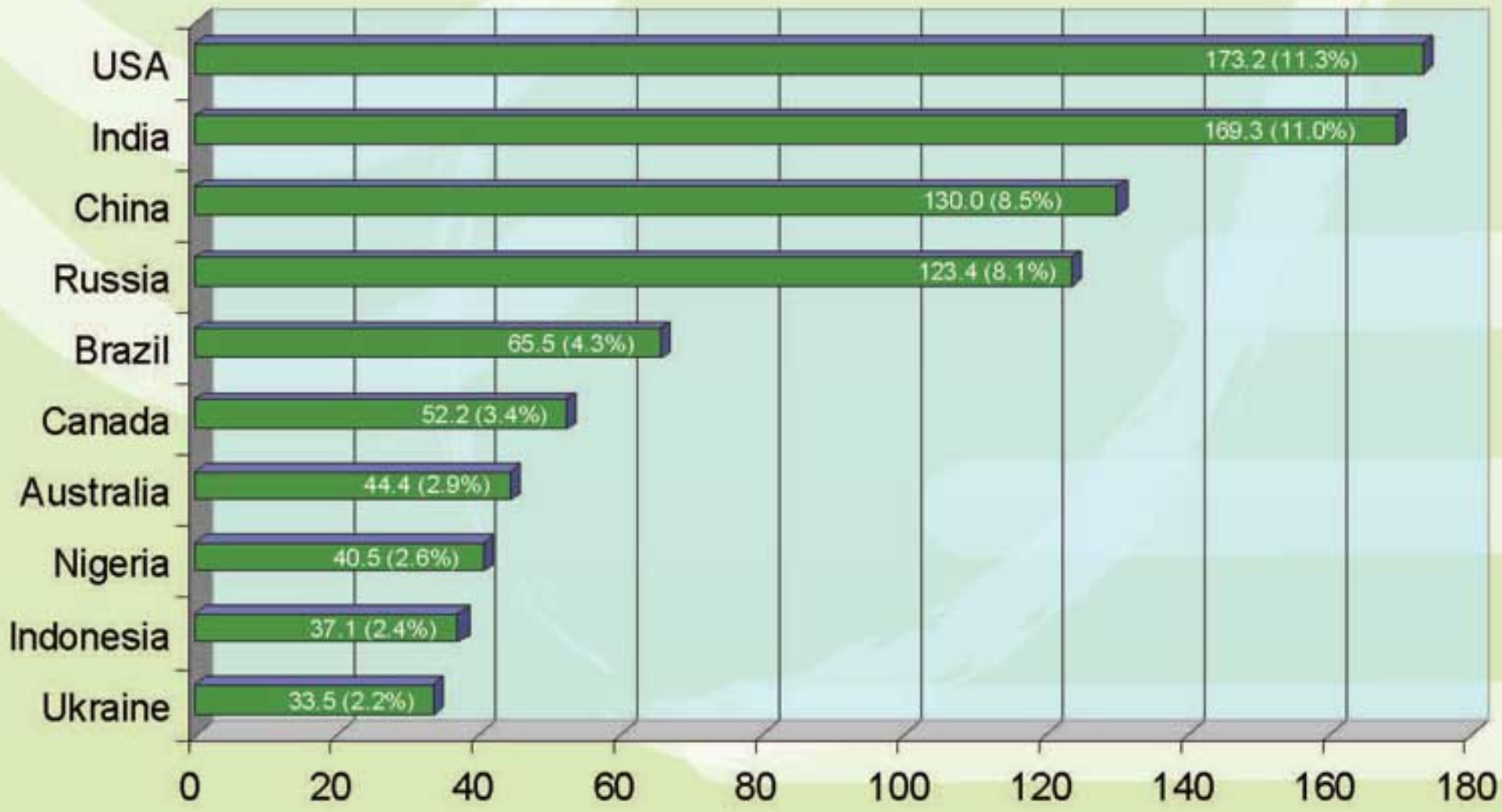
Regionwise Arable and Permanent Cropped Areas of the World

(World: 1533 million ha)



Arable and permanent cropped area (**million ha**) and its share in the total area (%)
Top 10 Countries



Source : ICID NCs (2010), FAO Stat-FAO Statistics Division (2011)

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ICID Awards

ANNUAL WATSAVE AWARDS

ICID 'WatSave Awards' instituted in the year 1997 are presented annually to recognize 'outstanding contributions to water saving in agriculture' across the world. Awards are given in four categories viz. (i) Innovative Technology, (ii) Innovative Water Management, (iii) Young Professionals, and (iv) Farmer. The Awards are made in respect of actual realized savings and not for promising research results, plans and/or good ideas/intentions to save water. Each award carries prize money of US$ 500 and a Citation.

Award Winning Contributions (1998 - 2010)

Innovative Water Management Award : South Africa (2010), India (2009), Egypt (2008), South Africa (2007), South Africa (2006), China (2005), India (2004), Pakistan (2003), Egypt (2002), China (2001), Spain (2000), Egypt (1999), China (1998).

Technology Award : UK (2010), Pakistan (2009). India (2008), Brazil (2007), China (2006), Turkmenistan (2004), Australia (2003), UK (2002), Korea (2001), China (2000).

Young Professionals Award : Australia (2009), Australia (2008), India (2006), Egypt (2005), Spain (2004), USA (2003), India (2002), India (2001), China (1999).

Farmer Award : India (2009)

ANNUAL BEST PAPER AWARD

Instituted in 2006 for the outstanding paper contributed to Irrigation and Drainage (the Journal of ICID). Annually, an award will be given to the best paper published in the issues of the Journal in the preceding year (January-December). The award will be a citation plaque and Gift Books from M/s. John Wiley & Sons Ltd. (UK).

Best Paper Award : France (2010), China (2009), The Netherlands, Pakistan (2008), South Africa (2007), India (2006)

BEST PERFORMING NATIONAL COMMITTEE AWARD (TRIENNIAL)

Instituted in 2002 to recognize the outstanding contribution of a National Committee to ICID activities. The award carries a Rolling Trophy and a Memento.

- **1st Award : Korean National Committee (KCID) at 18th ICID Congress, Montreal, 2002,**
- **2nd Award : Egyptian National Committee (ENCID) at 19th ICID Congress, Beijing, 2005, and**
- **3rd Award : Iranian National Committee (IRNCID) at 20th ICID Congress, Lahore, 2008.**

BEST PERFORMING WORKBODY AWARD (TRIENNIAL)

Presented at every Congress from 2005 to recognize 'Excellence in Performance by Workbodies'. The Award carries a Citation and a Certificate/Plaque to Chairman and all members

- **1st Award : Presented to Working Group on History of Irrigation, Drainage and Flood Control Projects (WG-HIST) at the 56th IEC and 19th ICID Congress, Beijing, 2005**
- **2nd Award : Presented to ICID Journal Editorial Board (EB-JOUR) at the 59th IEC and 20th ICID Congress, Lahore, Pakistan, October 2008**

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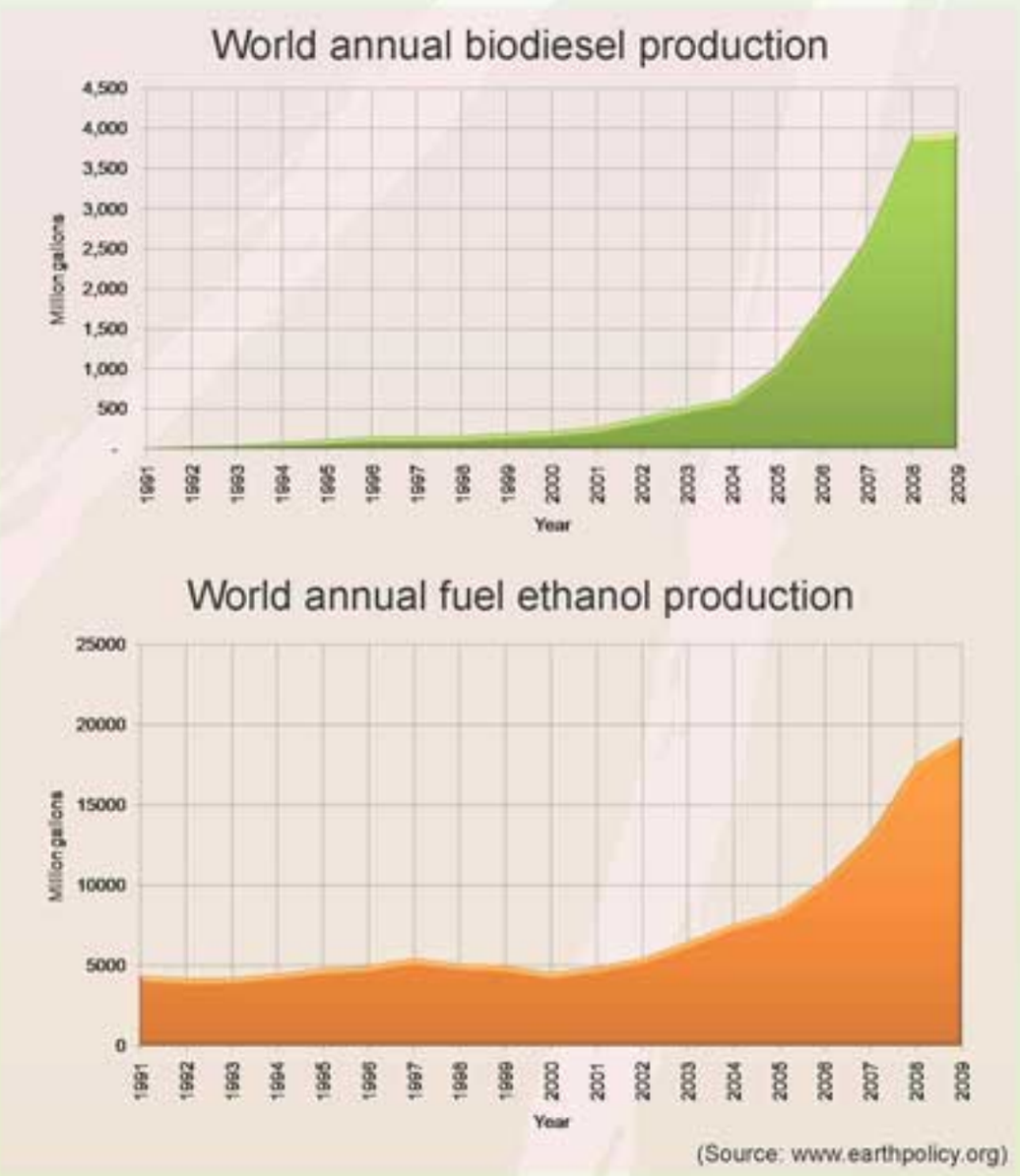
Water for Food and Bio-energy

- Global production of ethanol and biodiesel increased from 4.8 billion gallons in 2000 to 21 billion gallons in 2008.

- Globally, irrigation water allocation to biofuel production is estimated at 44 billion cubic meters.

- With current planning, biofuel crops will require 30 million ha of cropland and 180 billion cubic meters of additional irrigation water.



(Source: www.earthpolicy.org)

Biofuel production by some countries

Country	Ethanol (Million litres)	Bio-diesel (Million litres)	Total (Million litres)
Brazil	19 000	227	19 227
Canada	1 000	97	1 097
China	1 840	114	1 954
India	400	45	445
Indonesia	0	409	409
Malaysia	0	330	330
USA	26 500	1 688	28 188
European Union	2 253	6 109	8 361
Others	1 017	1 186	2 203
World	52 009	10 204	62 213

Source: based on F.O. Licht, 2007, data from the OECD–FAO AgLink-Cosimo database.

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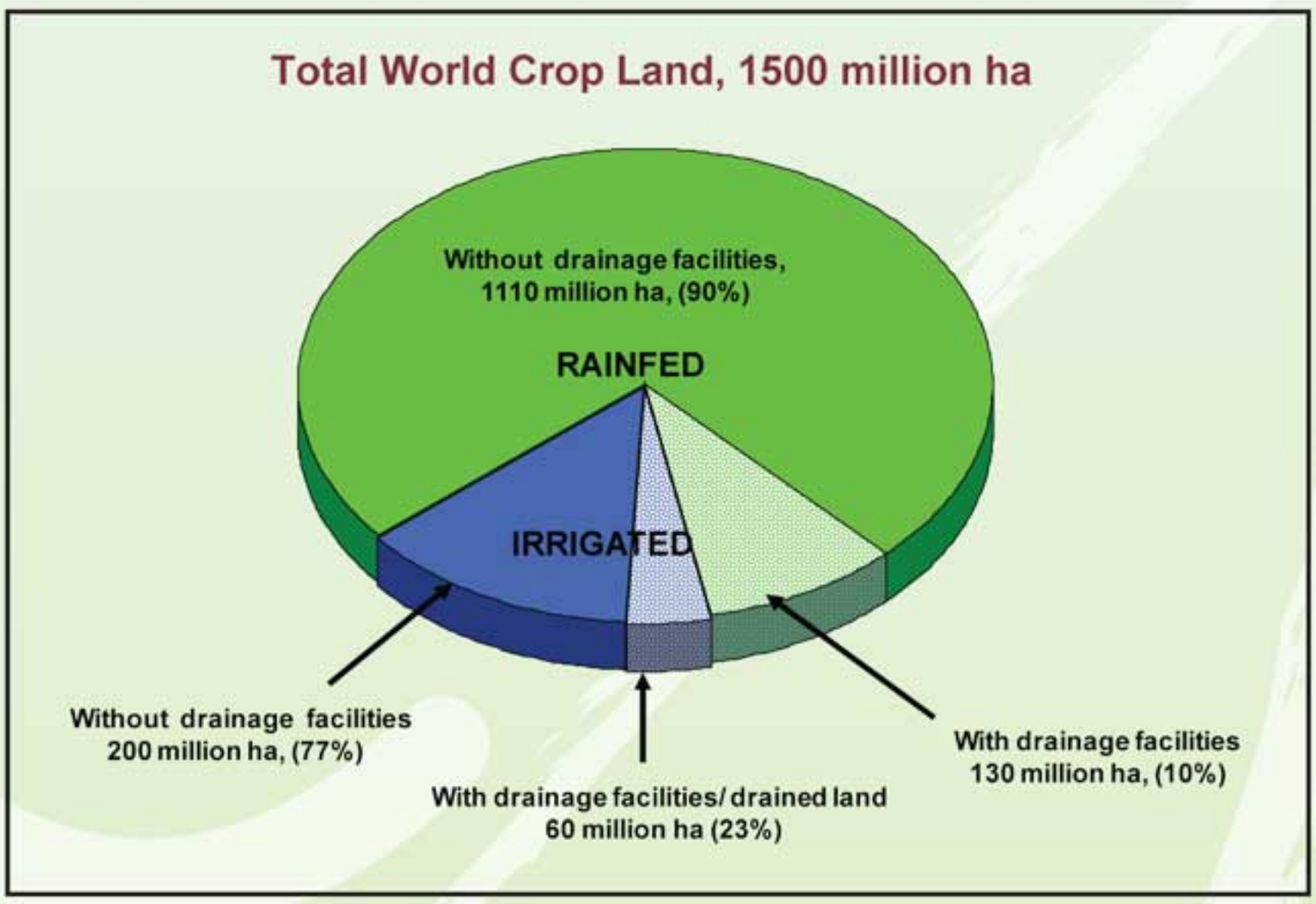
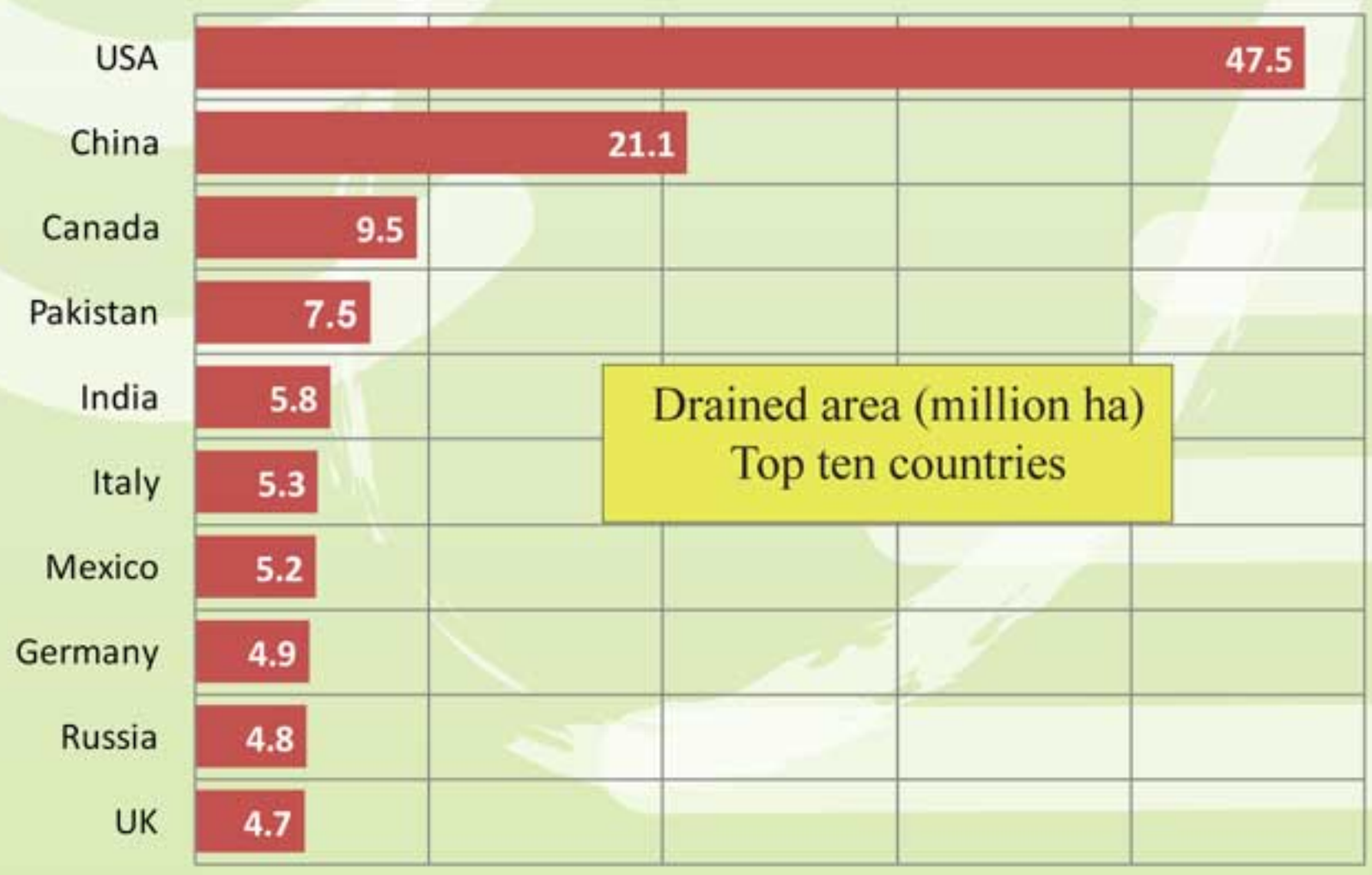
Agricultural Drainage in the World

Agriculture Drainage involves land and water management through the process of removing excess surface water and managing shallow water tables by retaining and removing water to achieve an optimal mix of economic and social benefits while safe guarding key economical functions





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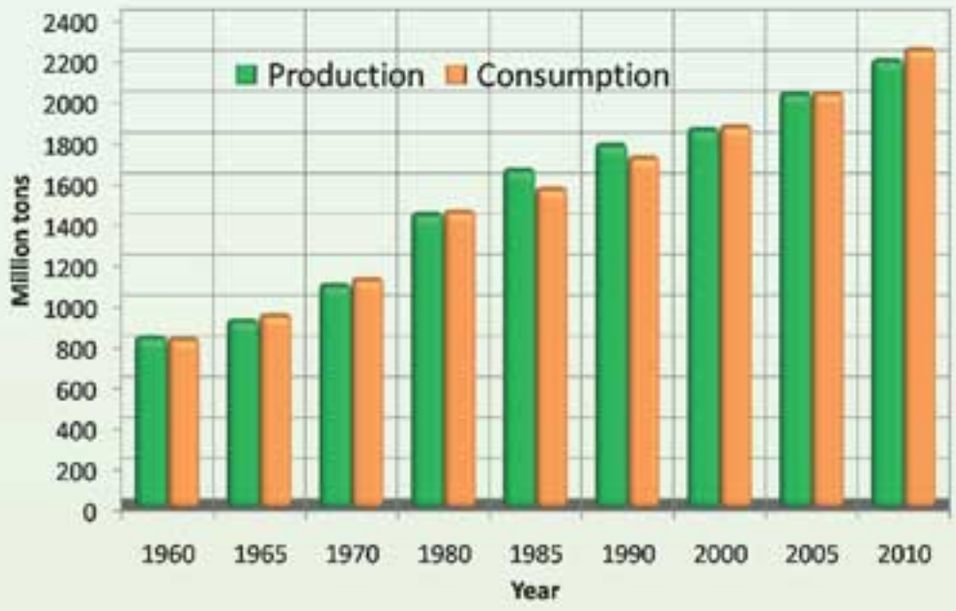
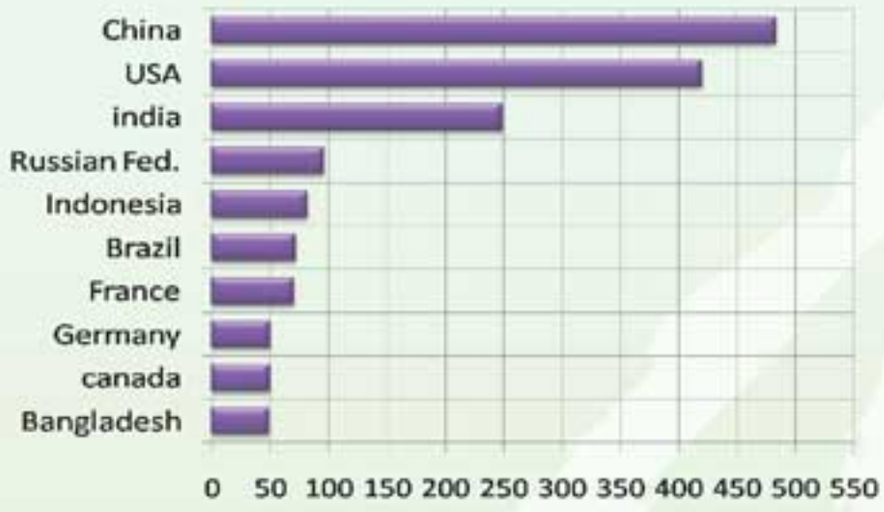
World Cereal Production

World Grain Production and Consumption



(Source: http://www.earth-policy.org)

Top ten countries in food grain production

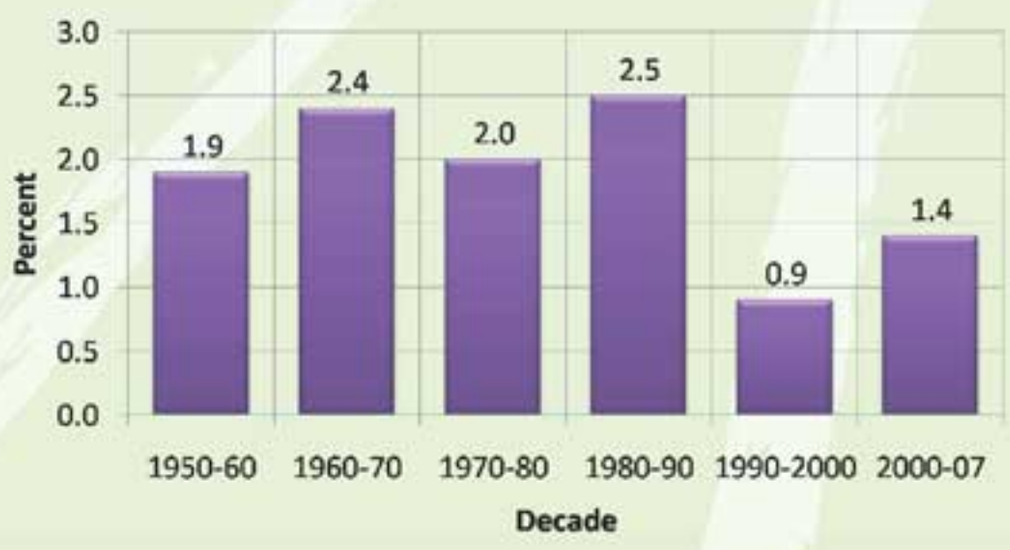


Source : ICID NCs (2011); FAO Statistical Yearbook (2009)

World average grain yields (Tons/Hectare)

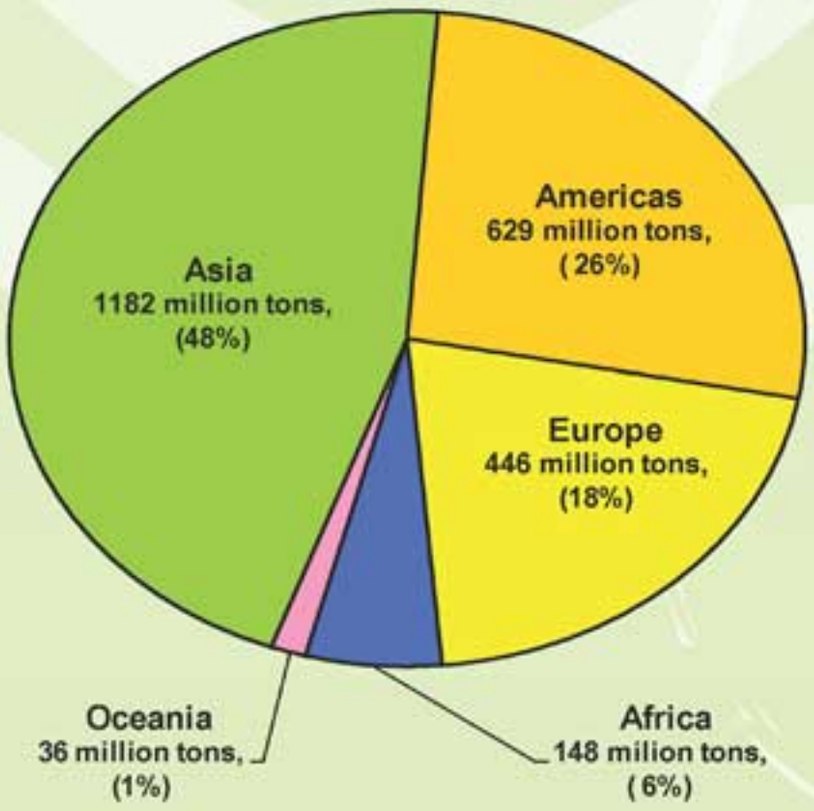
Source: Worldwatch Institute/ USDA, 2009

World grain yields
(Average annual percent increase by decade)

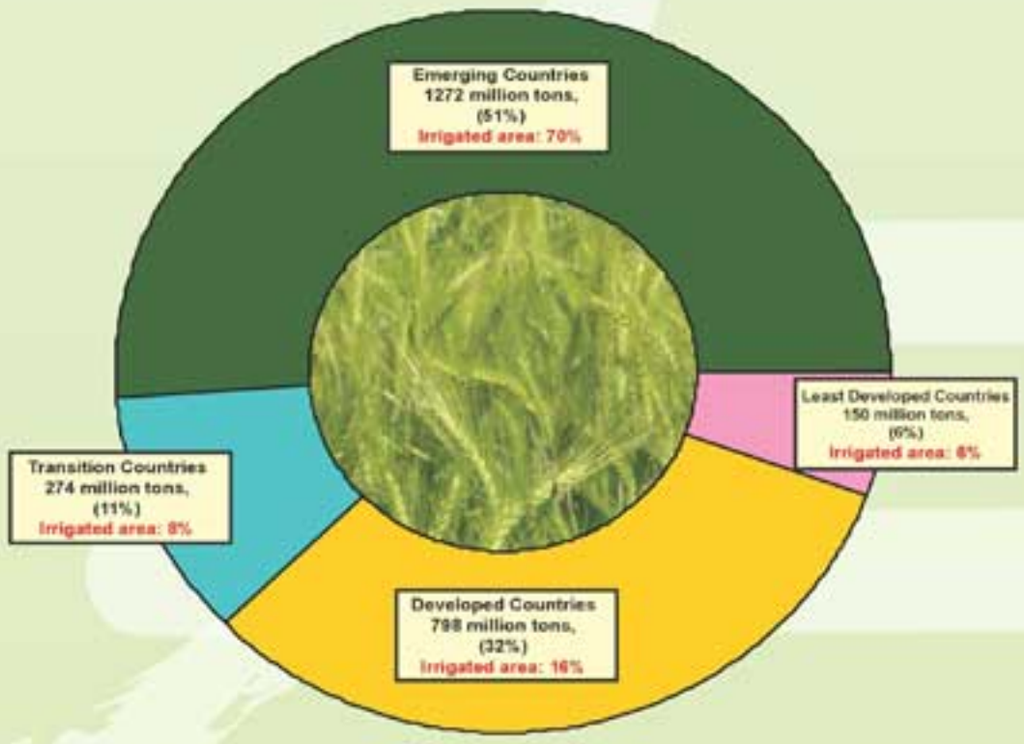


(Source: www.earthpolicy.org)

Foodgrain Production (Regionwise)



Foodgrain Production (Economic Statuswise)



Source: FAO STAT- FAO Statistics Division 2011

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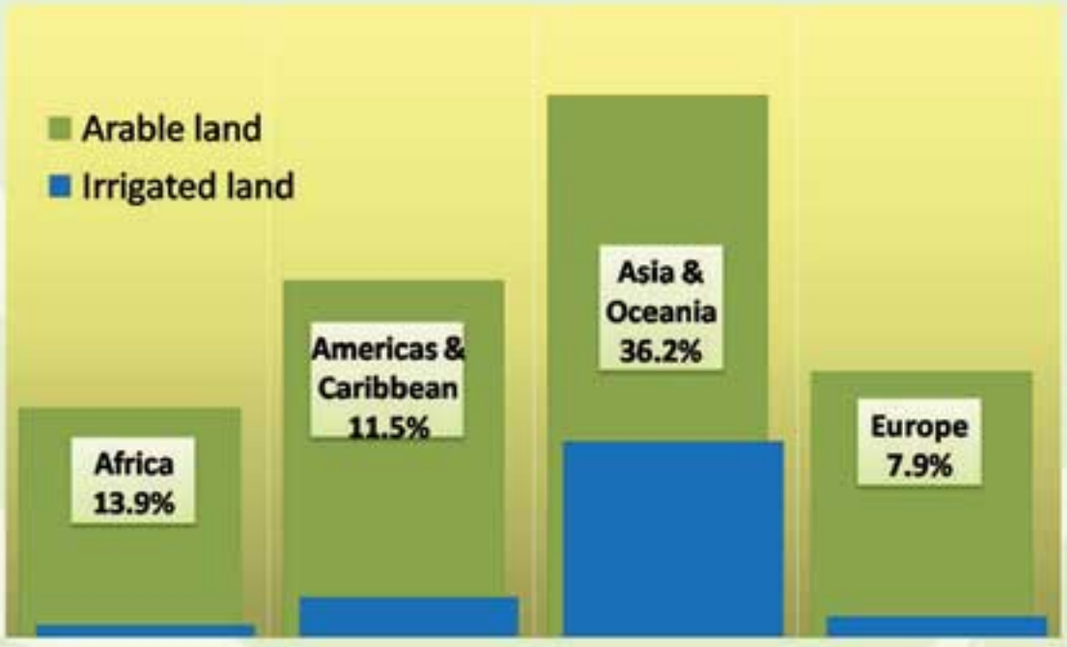
World Irrigation Scenario

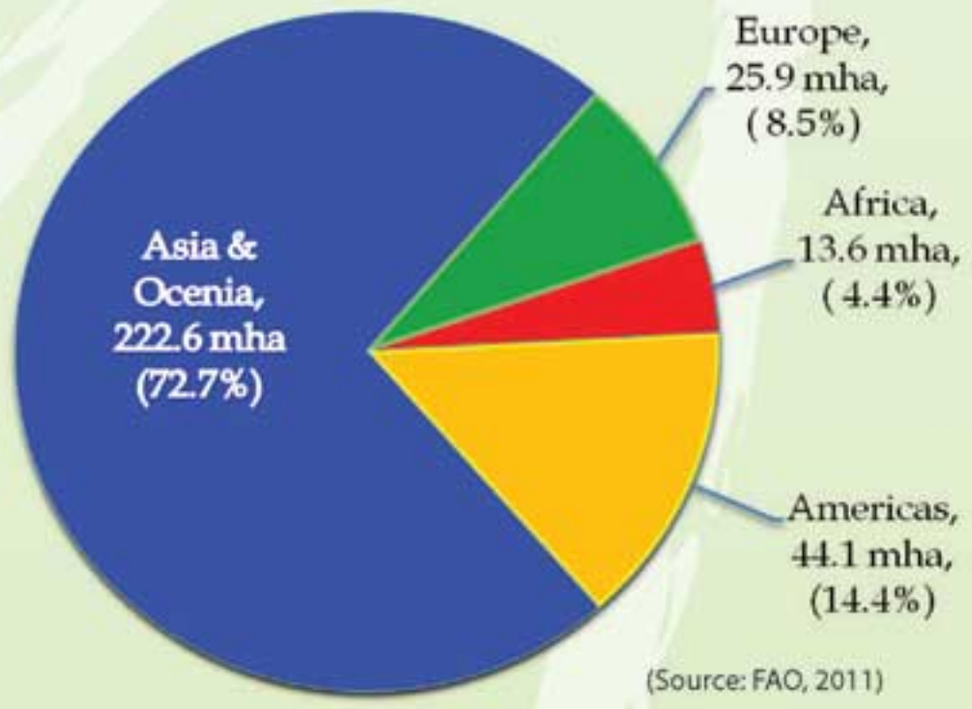
World irrigated area (million ha)

(Source: ICID/FAOSTAT)

Irrigated area as percentage of arable land

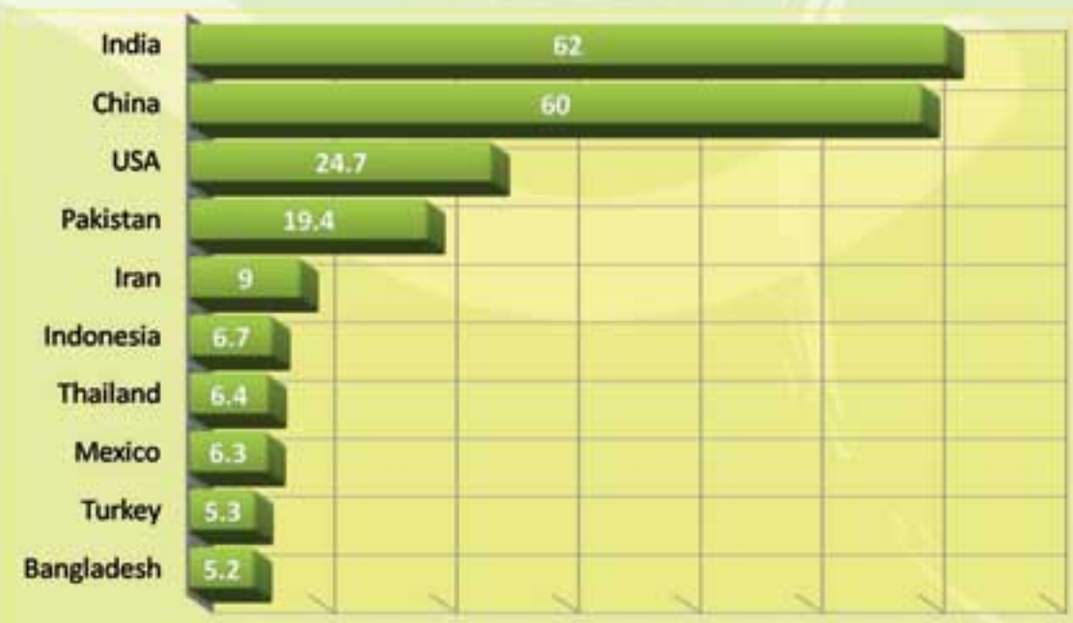


Regional spread of irrigated area



(Source: FAO, 2011)

Irrigated area (million ha) - Top ten countries



World irrigated area (Hectares/ 1000 people)

(Source: FAO)

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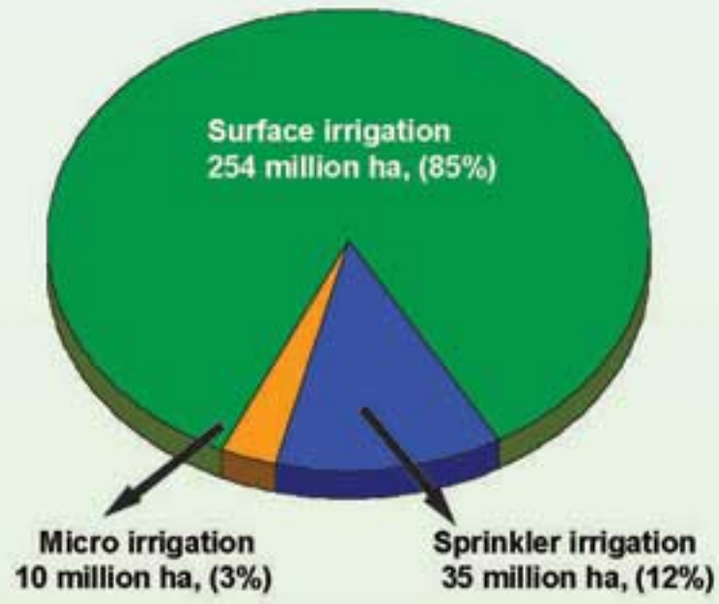
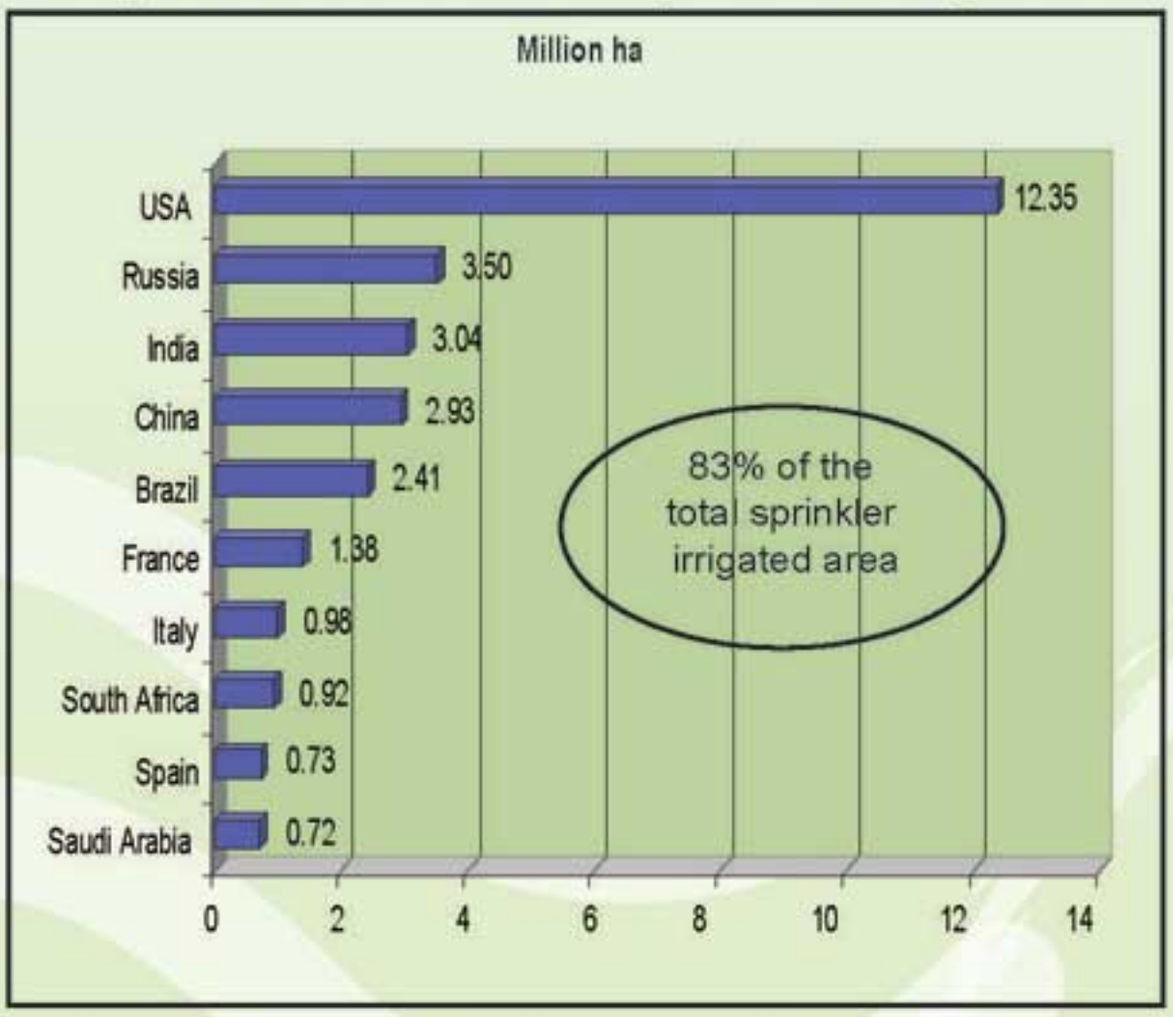
Sprinkler and Micro Irrigated Areas of the World

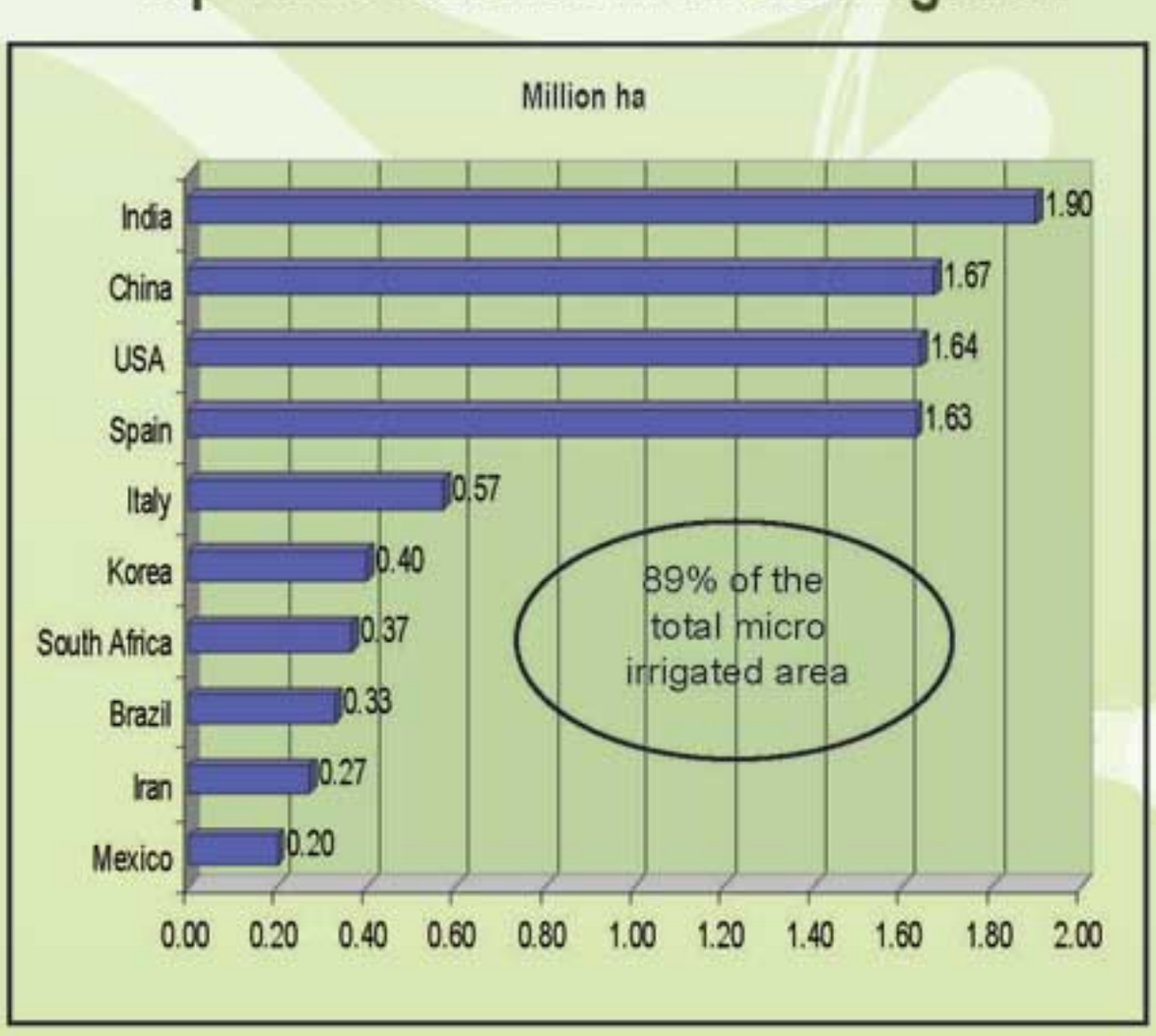


Top Ten Countries in Sprinkler irrigation



Sprinkler (centre pivot) irrigation, Iran

Top Ten Countries in Micro irrigation



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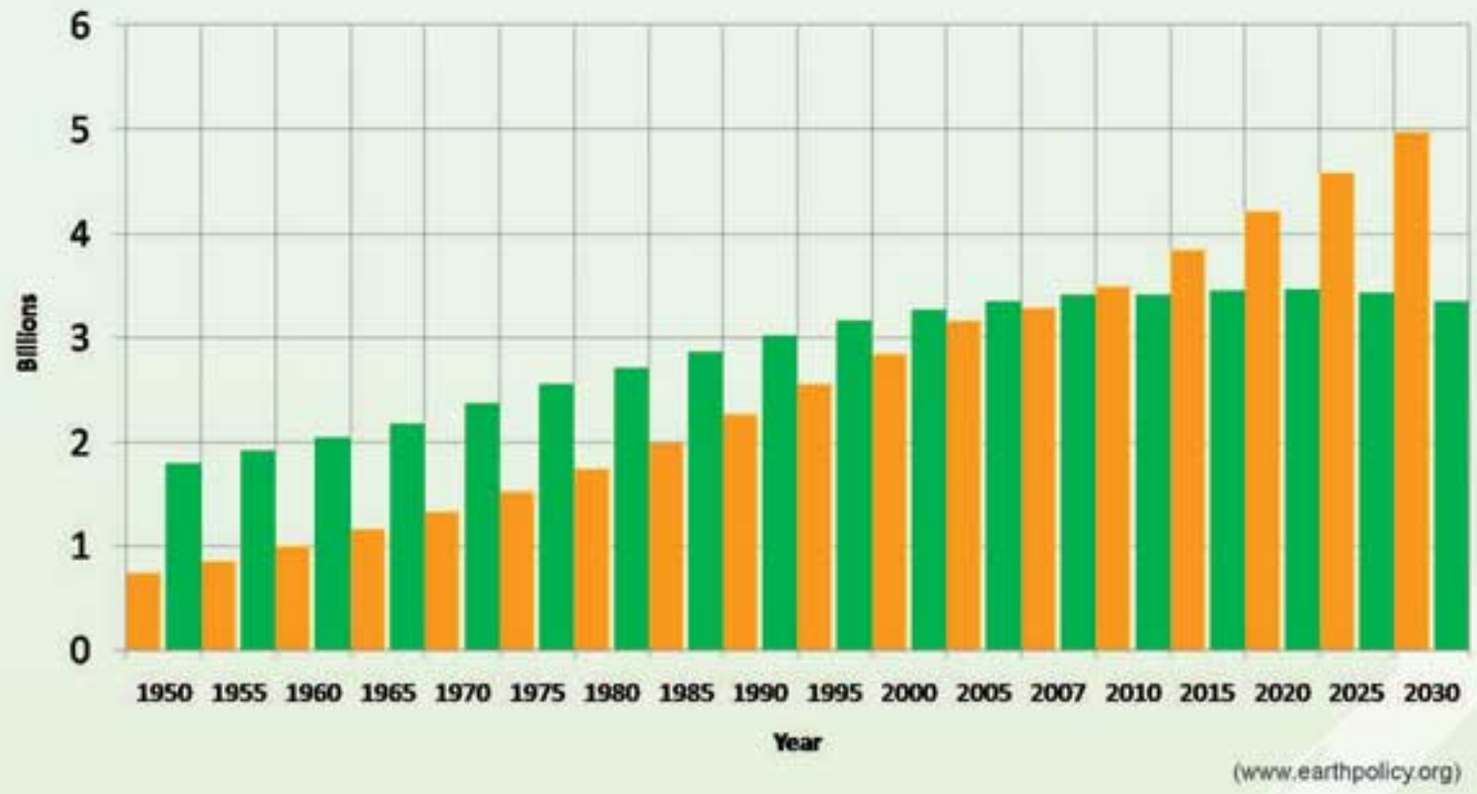
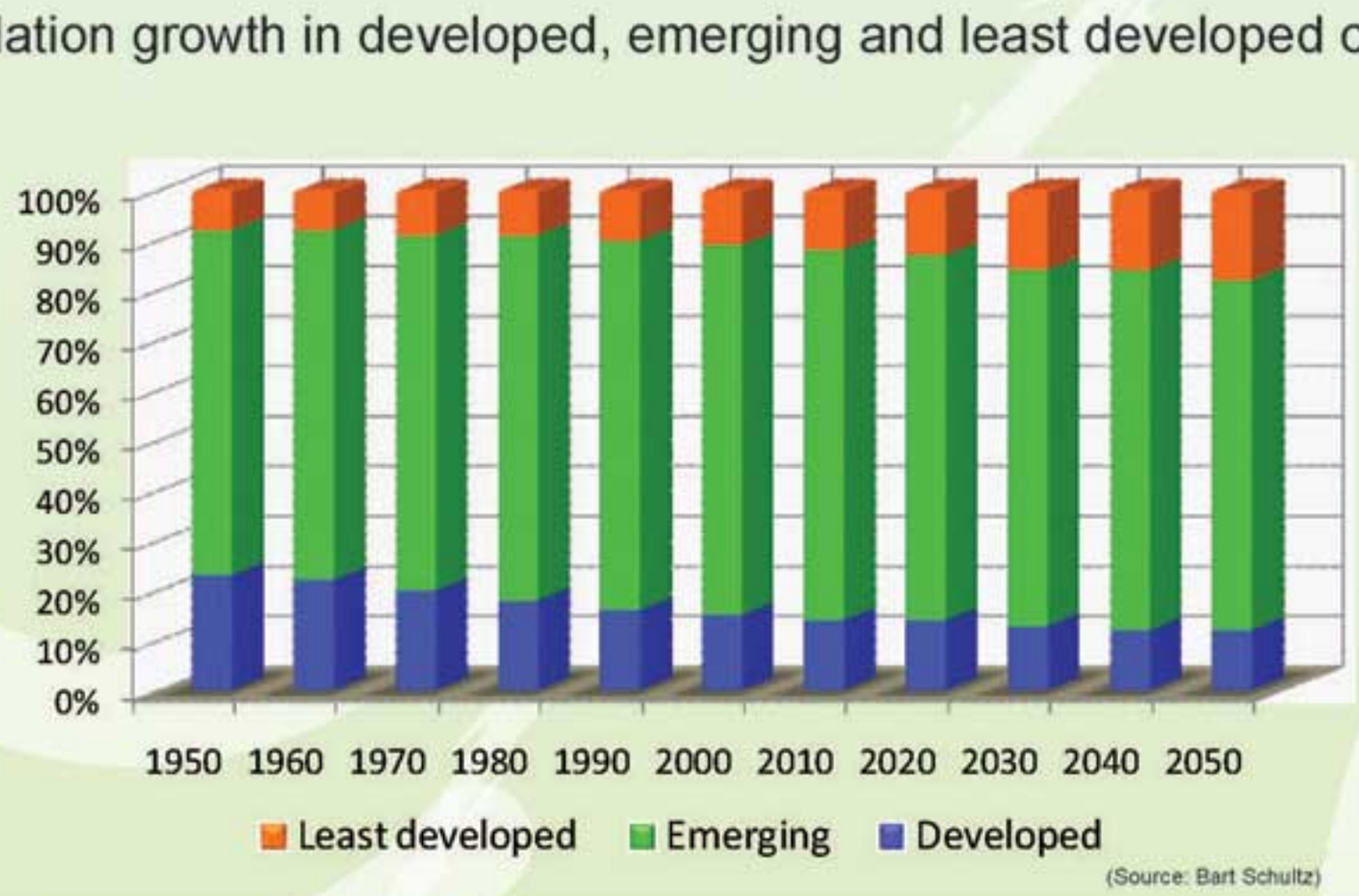
World Population Scenario





Sr. No.	Country	Population (Million)
1	China	1338
2	India	1189
3	USA	310
4	Indonesia	236
5	Brazil	191
6	Pakistan	185
7	Bangladesh	164
8	Nigeria	158
9	Russian Fed.	142
10	Japan	127
Total		4040
World		6521
Top 10 as %		61.9

Sr. No.	Country	Population density with ref. to Geo Area (People / Sq. km.)
1	Bangladesh	1142
2	Mauritius	650
3	Chinese Taipei	596
4	Korea Rep.	490
5	Lebanon	413
6	Netherlands	400
7	India	362
8	Israel	343
9	Japan	337
10	Belgium	327

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Wastewater Use in Irrigated Agriculture

Wastewater can be defined as "a combination of one or more of: domestic effluent consisting of black water (excreta, urine and faecal sludge) and grey water (kitchen and bathing wastewater); water from commercial establishments and institutions, including hospitals; industrial effluent, storm water and other urban run-off; agricultural, horticultural and aquaculture effluent, either dissolved or as suspended matter". (Sick Water, UNEP, 2010)

- The use of wastewater in agriculture is growing due to water scarcity, population growth and the recognition of its resource value. It has been estimated that at least 20 million ha in 50 countries are irrigated with raw or partially treated wastewater.

- Wastewater can be used to substitute for other better quality water sources, especially in agriculture. However, in many countries, wastewater and excreta used in crop production are not adequately treated.

- The uncontrolled use of wastewater in agriculture has important health implications for product consumers, farmers, and communities in wastewater irrigated area. At least one-tenth of the world's population is estimated to consume foods produced by irrigation with wastewater.

- Wastewater is used in urban agriculture which supplies a large proportion of the fresh vegetables sold in many cities, particularly in developing countries.

- The regulation of water quality for irrigation is of international importance because agricultural products grown with contaminated water may cause health effects at both the local and international levels.

Twenty countries with the largest volume of wastewater used for irrigation (million cubic meter)

* California and Florida.
Source: Jiménez and Asano 2008.

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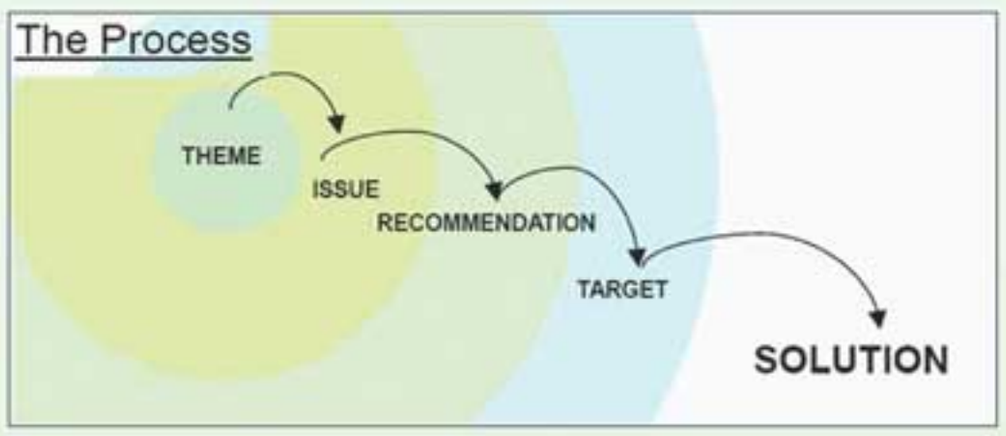
6th World Water Forum

12–17 March 2012, Marseille, France

6th WORLD WATER FORUM MARSEILLE, FRANCE '12

Contribute to "Time for Solutions" and Share Your Solutions with the World

The Step wise approach for "Solutions"



3 Strategic Directions	12 Key Priorities for Water Action
Ensure everyone's well being	1.1 Guarantee access to water for all and the Right to Water 1.2 Improve access to integrated sanitation services for all 1.3 Contribute to improved hygiene & health through water and sanitation 1.4 Prevent and respond to water-related risks and crises 1.5 Contribute to cooperation and peace through water
Contribute to economic development	2.1 Balance multiple uses through IWRM 2.2 Contribute to food security by the optimal use of water 2.3 Harmonize water and energy 2.4 Promote green growth and value ecosystem services
Keep the planet blue	3.1 Improve the quality of water resources and ecosystems 3.2 Adjust pressures and footprints of human activities on water 3.3 Respond to climate and global changes in an urbanizing world
3 Conditions for success	1. Good governance 2. Financing water for all 3. Enabling environments
REGIONS	▪ Americas ▪ Asia Pacific ▪ Mediterranean ▪ Europe ▪ Africa

KEY PRIORITY 2.2 CONTRIBUTE TO FOOD SECURITY BY OPTIMAL USE OF WATER

Leader: Dr. Pasquale Steduto, FAO

Co-leader: Prof. dr. Bart Schultz, Pres. Hon., ICID and Chairman TF-WWF6

The Key Priority 2.2 has 9 Targets as follows

2.2.1 By 2020, sustainably increase by xx% - as compared to 2005-07 baseline – land & water productivity (yield per ha and per cubic meter) of rainfed agriculture (for specific crop categories).

2.2.2 By 2020, sustainably increase by X% - as compared to 2005-07 baseline – water productivity per unit land and per year (yield per cubic meter, per ha and per year) of irrigated agriculture (for specific crop categories).

2.2.3 Increase sustainably productivity and lower costs of water management (yield per ha, per m^3 of water and per $$ of production cost) in such a way that by year 20yy there is food security at affordable prices for all.

2.2.4 By year 20.., increase by x% - as compared to 2005-07 baseline – the safe use of non-conventional waters, either (treated) waste water or other low-quality water, in agriculture.

2.2.5 By year 20yy increase by xx% the capacity of water storages in support of irrigated agriculture (either supplementary, deficit, or full irrigation) – within the framework of an environmentally sufficient and socially sound management.

2.2.6 By 20yy, develop and adopt two "regional" (e.g. West Africa; Europe/ Euro-Med) visions for food security and water, and 200 local sustainable agriculture plans.

2.2.7 By 20yy, develop national strategic action programmes for key 'hotspot' aquifers exploited by intensive agricultural use (% aquifer depletion, % pollution), including a local definition of maximum admissible drawdown (MAD) and local definition of maximum admissible pollution levels (MAP) for agricultural uses.

2.2.8 By 2015, define water-related components of a strategy that will improve food supply chain efficiency by 50% and promote sustainable diets, including steps for its implementation by 2025.

2.2.9 By 2015, elaborate international agricultural water related guidelines to support the small-holders farmers in order to better manage agricultural water, produce more goods and services.

Besides the above Dr. Safwat Abdel Dayem, Vice President Hon., ICID will be the Coordinator on behalf of Arab Water Council for Target VI; and for the key priority 2.1: Balance Multiple Uses through IWRM, Mr. François BRELLE, Président, AFEID will act as Co-leader.