Message from the President

Dear Friends,

I once again profusely thank the Indonesian National Committee for their marvelous organization and hosting of our 61st IEC and 6th Asia Regional Conference. Our Indonesian hosts went out of their way to ensure a highly successful set of meetings, and we are deeply grateful for their display of warmth, hospitality and hard work. This is a fine example of how national committees contribute to a strong ICID and global irrigation network.

I will not repeat the deliberations and conclusions of the Yogyakarta meetings, as these are on our website and have been reported elsewhere. I nonetheless draw your attention to the Powerpoint presentation prepared by President Honoraire Aly Shady, which is available on the ICID website <http://www.icid.org/pp_aly_iec2010.pdf>. He has done a very comprehensive job of compiling the key conclusions and deliberations of the Conference, and you may find this useful in your own work.

For me one of the highlights of Yogyakarta was to see new faces at the table from some of our member countries. These new faces were not silent; they actively participated at several levels in the IEC. New agreements were signed with partner organizations, and in this regard, I commend our colleagues in ARID and SARIA for their active leadership in ICID. This is being taken to new heights with strong participation in workbodies, organization of a regional meeting in Mali, and forging working alliances with some of the national committees. This is a superb development, and we must do all we can to nurture such initiatives, as it will allow ICID to achieve a fuller potential.

As I brought the IEC meeting to a close, I could not help but feel enormously privileged to serve as President of ICID, and to have an active hand in shaping the institution’s future. We broke new ground with the various MOAs signed for example with the Chinese National Committee (CNCID), the UN Water Decade Programme on Capacity Development (UNW-DPC), and with ARID. These can only strengthen ICID’s position on the world stage. Equally important were ICID’s contributions to the Asian Development Bank’s Conference in Manila, at the same time as our IEC. Our contributions were picked up by the press, which gave prominence to our thinking on the subject of irrigation improvements in Asia (see page 7). I feel a certain pride in being associated with ICID, and I hope the same is true for you. I ask that we work together to build this, the largest network of irrigation and drainage experts, even stronger in the years ahead.

I close by thanking all members of the ICID family for their many contributions and hard work during the year. And I wish you and your families a very blessed and peaceful holiday. May you experience a 2011 that is filled with much happiness, good health, and the strength to tackle the challenges that may lie ahead.

With my deepest gratitude and best wishes.

Chandra A. Madramootoo
President, ICID
Highlights of the 61st IEC Meeting and 6th ARC October 2010, Yogyakarta, Indonesia

More than 500 professionals, scientists, irrigation managers and consultants from 35 countries and international organizations gathered at the historic and scenic city of Yogyakarta, Indonesia during 10-16 October 2010 to participate in the 61st International Executive Council (IEC) meeting and 6th Asian Regional Conference (ARC) of the ICID. The theme of the 6th ARC was Improvement of irrigation and drainage efficiency through participatory irrigation development and management under the small land holding conditions. During the week, more than 31 ICID Workbody/Task Force meetings, three full day seminars and three special sessions, and a technical exhibition were held. These events were organized by the Indonesian National Committee of ICID (INACID). The following are the highlights of the event:

The 6th Asian Regional Conference was opened in the Sheraton Mustika by His Highness Sri Paduka Paku Alam IX, the Vice Governor of Yogyakarta. The occasion was graced by H.E. Pawan Kumar Bansal, Minister of Parliamentary Affairs and Water Resources Government of India; Mr. Agus Widjanarko, the Secretary General of the Ministry of Public Works; Prof. Dr. Chandra A. Madramootoo, President of ICID; Dr. Ir. Roestam Sjarief, President of INACID; Dr. Ir. Mochamad Amron, General Director of Water Resources, Ministry of Public Works; and Ir. Imam Agus Nugroho, Chairman of the Organizing Committee.

Following the opening ceremony, a plenary session was held where a general report of the 6th ARC was presented by Mr. Paul van Hofwegen (The World Bank). He briefed the key findings from the papers contributed to the 6th ARC. It was brought out that a smallholder focus in most Asian countries is a prerequisite for successful irrigation management, efficient water use and food security. Dr. Reza Ardakanian, Director UN-Water Decade Programme on Capacity Development (UNW-DPC) presented the highlights of the workshop Improving Farm Management Strategies through AquaCrop: Worldwide Collection of Case Studies. The workshop was jointly organized by UNW-DPC, FAO and ICID and was held on 8-9 October concurrently with the 6th ARC. He said that UNW-DPC will create additional nodes for the AquaCrop network with potential for future cooperation with ICID. Mr. Ganesh Thapa, Regional Economist, Asia and the Pacific Division of IFAD talked on Re-engaging in Smallholder Small scale Irrigation to tackle Poverty Hotspots in Asia. He said that 87% of world’s 500 million small farms (<2 ha) are in the Asia/Pacific region and that investment in small-scale irrigation is an investment in economic development, poverty reduction, and wise environmental stewardship.

President Dr. Madramootoo, in his opening speech, deliberated on the current issues such as the continuing food crisis and volatile food prices, climate variability — floods and droughts, competition from other water users, population growth, lack of water storage capacity, demands for energy and alternative fuels, changing dietary patterns, weak institutional capacity, lack of investments in agriculture and water, weakened applied research and technology transfer capabilities, environmental and water quality degradation. President expressed his concern about slow transfer/uptake of technology in irrigation and drainage. He indicated some potential research themes such as drought and water scarcity; groundwater protection and management; low quality waters and wastewater reuse for irrigation; water harvesting and storage; drainage, and waterlogging and salinity control; lowlands development; on-farm water management and water use efficiency; energy and sedimentation control.

President Madramootoo apprised about ICID initiative in revamping of the International Programme for Technology and Research in Irrigation and Drainage (IPTRID) and said that there is an urgent need for ICID to rebuild its leadership capacity in this regard. The new programme will have regional nodes of national committees – South East Asia, Central Asia, Middle East, South/Central America, East & Sub-Saharan Africa, and West Africa. President Madramootoo mentioned the MoUs signed with Iran and China and said that an elaborate discussion with FAO on this new initiative was held on 13 October when Dr. Pasqualle Steduto of FAO and other senior Office Bearers of ICID met.

VPH Dr. S.Nairizi, Strategy Theme Leader ‘On-Farm’ made a presentation on On-Farm Water Management Towards More Crop Production during the Council meeting. The presentation can be viewed at <http://www.icid.org/s10_nairizi_onfarm.pdf>.

Photo: Aly Shady
The ICID WatSave Award 2010
Winning Contributions

• Technology Award: “Irrigation water security: promoting on-farm reservoirs in the UK” by Dr. Keith Weatherhead, Mr. Melvyn Kay and Dr. Jerry Knox (UK)

• Innovative Water Management Award: “Water distribution management at Valhartswater” by Mr. Kobus Harbron (South Africa)

Please see pages 4-5 for details

New Chairs of ICID Workbodies

• PCTA – VPH Felix Britz Reinders (South Africa);
• ERWG – Vice President Laszlo G. Hayde (Hungary);
• AMRWG – Dr. Luis Rendón Pimentel (Mexico);
• WG-CFM – Dr. Kamran Emami (Iran);
• WG-YPF – Mr. Yaser Barghi (Iran);
• WG-WATS – VPH Dr. Mohammed Hassan Amer (Egypt);
• WG-POVERTY – PH Peter S. Lee (UK);
• TF-WWF6 – PH Bart Schultz (The Netherlands); and
• TF-BIO-ENERGY – Mr. Laurie Tollefson (Canada)

New Vice Presidents (2010-13)

(From left) Dr. Ragab Ragab (United Kingdom), Engr. Husnain Ahmad (Pakistan), and Mr. Chaiwat Prechawit (Thailand) were elected for the term of three years

A Memorandum of Understanding (MoU) was signed between ICID and Chinese National Committee on Irrigation and Drainage (CNCID) to set up a Research and Training Centre in Beijing, China.
Promoting On-Farm Reservoirs for Irrigation Water Security in the UK

Dr. Keith Weatherhead and Dr. Jerry Knox, Cranfield University, together with UK Irrigation Association Executive Secretary Melvyn Kay, won the 2010 ICID WatSave Technology Award for their research and promotion of on-farm reservoirs in the UK. The annual ICID WatSave Awards recognize outstanding contributions to water conservation/saving across the world. The winning project promotes the use of on-farm reservoirs to store surplus winter water for use in drier summers. The construction of on-farm reservoirs has provided the water security essential to achieve timely production of high quality food that reduces water wastage from field to plate. Following is a summary of the innovative technology recognized by the WatSave Award.

Why on-farm water storages?

Irrigated cropping plays a relatively small but highly significant role in agriculture in the UK in terms of food production, rural businesses, and local employment. In eastern England, where most production is concentrated, the irrigated agri-business value chain supports some 50,000 rural livelihoods and contributes over £3bn annually to the region’s economy. Water is at the heart of this industry — without it many farmers would simply not be able to meet the quality and continuity of supply demanded by what is arguably one of the most sophisticated food markets in the world, dominated by supermarkets that can purchase supplies from around the world. Most irrigation water is abstracted from local rivers and streams and is used immediately with relatively little on-farm storage. The volumes are a very small proportion of the national total water use, but they have significant environmental impact because they are concentrated in the driest parts of the country and at the driest times of the year, when resources are scarcest.

In England and Wales all withdrawals for irrigation require an abstraction license or permit. Some 75 percent of the total volume of water licensed for irrigation is located within catchments already under stress in summer months. Yet, the underlying growth in irrigation water demand is still rising at 2 percent per annum. Climate change will increase demand further, while summer river flows and water availability will be reduced.

On-farm storage of higher flows during winter seems an obvious solution. Once the water is in the reservoir, farmers can plan cropping for the following year, and their supply contracts with supermarkets and processors, with much greater certainty. Reservoirs store the high winter river flows for use in the drier summer period. The water thus ‘conserved’ is then ‘saved’ for other domestic, industrial, and environmental uses during the summer months. Farmers with a winter-filled reservoir have an assured supply for their summer irrigation needs, and the environmental impact of irrigation abstraction is reduced during the summer months when water resources are most constrained. However, there were economic, technical, and regulatory issues to resolve in order to achieve wider uptake of on-farm reservoirs.

Challenge in spreading the innovation

The challenge was how to encourage farmers to take up this option because they have often found there are many obstacles in their way — planning, safety, environmental, leisure, and even archeological — which frustrate reservoir developments and discourage investment. The challenge was how to encourage farmers to take up this option because they have often found there are many obstacles in their way — planning, safety, environmental, leisure, and even archeological — which frustrate reservoir developments and discourage investment.

In 2006, the East of England Development Agency (EEDA) funded Cranfield and the UKIA to produce an agricultural water strategy for eastern England. The study involved extensive consultation with key informants in the agri-food industry and other stakeholders with interests in water for food and the environment. The results brought together the views of the farmers, landowners, water regulators and government agencies interested in protecting water, food production, rural employment and businesses. Among the key recommendations was the need for more on-farm water storage, particularly shared reservoirs that enabled investment and benefits to be spread among groups of farmers.

During the next four years, Cranfield and the UKIA worked with key stakeholders in agriculture (notably the National Farmers Union), the environmental regulators, and governmental bodies responsible for business sustainability actively encouraging farmers across the region to rethink the role of on-farm storage.

In 2009, the Environment Agency funded Cranfield and the UKIA to develop materials for promoting investment in on-farm storage. Subsequently, a detailed technical report and an information booklet Thinking about an irrigation reservoir? – A guide to planning, designing, constructing, and commissioning a water storage reservoir was prepared and disseminated to over 2,500 farmers and agri-food businesses across the eastern region. Evidence from EEDA over the past year showed that 18 agri-businesses in the eastern region have applied for grant funding for reservoirs totaling over 2 million cubic metres and involving private investment of over £6 million. Eleven schemes have now been approved, three are in the pipeline, and a further four are under consideration. This is a most positive shift in agricultural water resources planning that benefits everyone.

More information about the project can be viewed at <http://www.ukia.org>. Melvyn Kay can be contacted at <m.kay@ukia.org>.
Water Distribution Management at the Vaalharts Irrigation Scheme of South Africa

Vaalharts is the largest irrigation scheme in South Africa having over 29000 ha. Computerisation of the already well-developed manual water administration system using digitised and electronically imported flow data saved 17.5 million m$^3$ in a single year. This is sufficient to irrigate 74 additional farms. Mr. Kobus Harbron’s work on Water distribution management at Vaalharts Water resulted in his receiving the ICID WatSave Innovative Water Management Award 2010. A strong presentation impressed the Panel of judges and made it credible that this saving represents 5 percent of the losses. Following is a summary of the presentation:

Background
The Vaalharts irrigation scheme commissioned in 1930 is situated at the Northern Cape provinces in South Africa. It serves 29,181 ha through around, 1900 abstraction points through pressure regulating sluices. The Vaalharts Water User Association (Vaalharts Water) took over the scheme from the Government in 2003. The scheme consists of a main canal (38.3 m$^3$/s) and a network of canals covering a distance of more than 100 km.

The objectives of the water distribution management office at Vaalharts Water is to supply the correct amount of water to the right place at the right time with the minimum water loss within the limitations of the system, and to inspect and maintain the canal network to prevent excessive water losses due to bad maintenance.

At Vaalharts Water this can be a very daunting task, given the size of the scheme and the number of farmers that require water on a weekly basis. To assist them in this task and to improve on their service delivery to the irrigation farming community, they have decided to replace their manual water distribution system with a computerized system called the Water Administration System (WAS).

Manual system
The previous manual water distribution system had certain limitations that cause excessive water losses that are difficult to prevent. As many people are involved, the calculation errors commonly occur. Losses are unknown factors which are estimated most of the time. Personnel changes have a negative effect on water distribution management due to loss of information and experience.

Computerized system
The computerised system in the form of the Water Administration System (WAS) addressed the above mentioned problems of the manual water distribution system and improved the operations at Vaalharts Water. In the computerized system orders are captured directly into the computer by water control officers, calculation errors are eliminated, water balances are updated on a daily basis, volumes are now quantified on a weekly basis, and not monthly as it were done in the past; water use efficiency reports are generated automatically, water shortages on canals due to human error are limited, canal leakages and breakages can easily be monitored due to fixed water losses, water control officers have more time for inspections, minor repairs and time for attending clients.

Water savings
With the implementation of the WAS program Vaalharts Water managed to decrease the losses from 32 percent to 26.7 percent. A 5 percent saving, which is equivalent to 17.5 million m$^3$, was therefore realized in the first year after implementing the WAS program. This saving is the equivalent of an additional 1920 ha that could have been irrigated given the fact that the full water quota at Vaalharts Water is 9,140 m$^3$/ha. Mr. Kobus Harbron’s can be contacted at <kobus@vhwater.co.za>.

Transboundary Ecological Problems of Central Asia

ICID participated in an International Conference on Transboundary ecological problems of Central Asia: Application of international legislative mechanisms for their solution which also had a galaxy of experts, scientists and environmentalists from 30 countries drawn from Austria, Belgium, Britain, Germany, India, Spain, Italy, Canada, China, South Korea, Netherlands, Russia, USA, Turkey, Ukraine, France, Switzerland and Japan. Apart from ICID, invited for this conference were nearly 60 other international organizations and financial institutions like the UN, OSCE, World Health Organization, World Bank, World Wildlife Fund, and World Conservation Union.

Participating in the Inaugural Plenary M. Gopalakrishnan, Secretary General, ICID, stressed the importance of protection and preservation of the environment guaranteeing food security, and achieving food security as per the Millennium Development Goal 1. In the changing environ of climate change this is all the more necessitated. He urged the importance of integrated water resources development and management plans of the transboundary basins that takes on board the use of water resources not only in terms of hydropower energy but also in terms of other uses like augmenting the basin’s capability and ability to fulfil its commitments to global food basket and thereby achieve MDG1 — “Halving the global hungry lot by 2015.”

Strengthening the present role of ‘Scientific Information Centre,’ an arm of ICWC, to take on board hydropower generation aspects could provide a key to move on to a comprehensive IWRM and help better cooperation.

International financial institutions and organizations can perhaps facilitate strengthening of ecological stability of the region including attempts for the cooperation with all stakeholders including the civil society of the countries in the zone of the project action; the openness of dialogues and opportunities extended to all stakeholders would yield the requisite wider public support in the whole region and help better planning and exploitation of the basin’s resources.
[SOUND PRINCIPLE NO. 53]

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The Lisbon conference was supported by all the relevant professional institutions including ICID, attracted 1,300 delegates from 85 countries, representing more than 90 percent of the world’s hydropower capacity. Prof. John Briscoe, previously well known to ICID when he was at the World Bank, spoke positively about the role of hydropower and its associated storage of water, but was critical about the relative lack of investment in storage in developing countries and the “tragic” direction of the MDGs putting the “social cart before the economic and development horse.” The World Bank and other international agencies need to rediscover infrastructure, something, he said, that is more likely to happen where developing countries have a proportionate role in these agencies.

Flood Management

There were many lively parallel sessions. Representing ICID, I was drawn especially to the session chaired by ICOLD ex-President Luis Berga on Hydrology, Floods and Climate Change. Prof. Berga emphasised the positive role of major reservoirs in successfully mitigating the recent floods in China. Abdul Basheer of the Andhra Pradesh Government in India also told us about the attenuation of this year’s 2.55 M. ft³/s (73,000 m³/s) flood entering the Srisailam reservoir on the Krishna River which was successfully passed at a maximum of 1.48 M. ft³/s (41,000 m³/s).

There were other sessions of interest to ICID including project financing (chaired by Judith Plummer of the World Bank) and maximising multiple benefits.

Learning from Incidences — Sayano Shushensk Hydro Plant

There was a packed and lively meeting on the lessons to be learnt from the tragic failure of the powerhouse at Sayano Shushensk in Siberia, and two less well-reported similar accidents in other countries. At Sayano Shushensk, fatigue failure of head cover bolts of one of the ten 640 MW turbines carried away the roof of the powerhouse with 75 staff, flooded the controls for the emergency shut-down and spillway sluices and also effectively destroyed five of the other turbines. Apart from the design lessons, the key finding is that operators need to be more aware of the danger of fatigue, especially now that hydropower is increasingly used to backup intermittent sources of power, such as wind power, and thus can experience more dynamic loading than in the past.

Reservoir Sedimentation

I participated in a fascinating session chaired by the world-renowned expert Sultan Alam, on sediment management, which was of key relevance to the work of ICID’s new task force on this subject. Some examples covered by this session were for run-of-river schemes and thus, highly relevant to barrage as well as dam sedimentation. Two examples (including that of Merowe on the Nile in Sudan) highlighted the need to anticipate unusual depositions of sediment that can take place during construction. Moreover, Tom Jacobsen of Norway pointed out that although modelling, physical and digital, can forecast reservoir sedimentation under more or less average conditions, we need to make people more aware of the risk of total sedimentation under extreme conditions. He cited examples in Nepal, Peru and Philippines that showed that as well as looking at the normal life and average sedimentation rate of reservoirs, there was a risk that an exceptional event could fill medium and small reservoirs very suddenly. Thus, it is prudent to plan measures (including bypassing, flushing and dredging) that would make it possible to live with this contingency.

Overall, this was a most successful and enjoyable event, and showed the benefit of ICID continuing to work with the hydropower and dams community.

PH Peter Lee may be contacted at <peterlee.icid@btinternet.com>.

Boost Investment in Irrigation Technology - ICID at the ADB Conference 2010 in Manila

About 600 representatives from government, private organisations, and industry from 53 countries gathered at the Asian Development Bank (ADB) headquarters, Manila from 11-15 October to participate in the conference on Water: Crisis and Choices.

It was brought out that Asia’s ageing irrigation systems must be revitalized to produce more crops with less water in the face of the region’s surging demand for food and rising population.

Pres. Hon. Keizrul bin Abdullah (Malaysia) representing ICID, made a presentation based on the paper prepared by ICID on Technologies in Irrigated Agriculture: Costs and Benefits. The paper brought out case studies from around the region to examine the broad range of technologies and tools available for improving the efficiencies both at the on-farm and of-farm levels. The paper recommended additional investments in on-farm technologies such as micro and sprinkler irrigation, which reduce demand for water while increasing crop yields. The paper also highlighted the need for more effective use of inputs such as fertilizers, energy and labor, improved advisory services for farmers, more private sector participation in technology development, and increased training and capacity building for irrigation staff and agencies. The presentation can be viewed at <http://www.adb.org/waterconference2010/doc/tech-irrigated-agriculture.pdf>.
Forthcoming and Future ICID Events

The 24th European Regional Conference (ERC) will be held during 14-16 March 2011 at Orléans, France. The theme of the Conference is ‘Groundwater Management’ and the topics are: (1) Hydro-geological studies, (2) Conjunctive use of ground and surface water, (3) Collective action and multi-actors processes, (4) The EU water framework directive and groundwater daughter directive, (5) Economic approaches, and (6) Each groundwater use has its own quality requirements. The deadline for early-bird registration is 31st December 2010; while the deadline for submission of abstracts of papers by 1 December 2010. For further details, please access the conference website at <http://www.groundwater-2011.net>, or contact Dr. Sami Bourarfa, Chair, Scientific Committee at <sami.bourarfa@cemagref.fr>.

The 25th European Regional Conference (ERC) will be held during 16-20 May 2011 at Groningen, The Netherlands. The theme of the Conference is ‘Integrated water management for multiple land use in flat coastal areas’ and the topics for the Conference are: (i) Multiple landuse, (ii) Fresh water management and salt intrusion, (iii) Flood risk management, and (iv) Institutional arrangements and history. Please submit abstracts of papers by 1 December 2010. For Productivity of water for agriculture and the challenges of climate change. In addition, two panels of experts and to special sessions will be organized. 1st Call for Papers will be posted on AMI website by December 2010.

The 21st Congress, 62nd IEC and 8th International Micro Irrigation Congress of ICID will be held during 15-23 October 2011 at Tehran, Iran. Please send the abstract of papers for 21st Congress to icid@icid.org and the abstract of papers for 8th International Micro Irrigation Congress (IMIC), to Ms. Fatima Aghdasi, Secretary, Technical Committee of 8th IMIC, Iran at <micro.congress@gmail.com>. For details of Congress Questions / Sub-topics / Special Session / Symposium and IMIC Sub-topics please visit <http://www.icid2011.org>. The deadline for submission of abstracts of papers for both the events has now been extended to 15 January 2011.

63rd IEC and 7th Asian Regional Conference, 24-29 June 2012, Adelaide, Australia. Contact: Mr Chris Bennett, Chief Executive Officer, Irrigation Australia Limited (IAL), (Incorporating ANCID, the Australian National Committee on Irrigation & Drainage), P.O. Box 1804, Hornsby, NSW 1635 Australia. Tel: +61 2 9476 0142, Fax: +61 2 9476 0792, Mobile: +61 439 997 491, E-mail: <chris.bennett@irrigation.org.au>, Website: <http://www.irrigation.org.au>.

11th International Drainage Workshop (IDW), September 2012, Cairo, Egypt. Contact: Dr. Hussien El-Atfy, Vice President Hon., ICID, Secretary, Egyptian National Committee on Irrigation and Drainage (ENCID), Coastal Protection Building, Fum Ismailia Canal, Shoubra El-Kheima, Cairo, Egypt. Tel: +20 2 312 3257, Fax: +20 2 310 9591, E-mail: <encid@link.com.eg>, Website: <http://www.mwri.gov.eg/Encid/Default.htm>.

64th IEC and 8th Asian Regional Conference, 2013, Turkey. Contact: Mrs. Serpil KOYLU, Turkish National Committee on Irrigation and Drainage (TUCID), Delvet Mahallesi İnönü Bulvari No. 16, 06100 Cankaya, Ankara, Turkey, Tel/Fax: +90 312 425 4614, E-mail: <tucid@dsi.gov.tr>.

12th International Drainage Workshop (IDW), June 2014, St. Petersburg, Russia. Contact: Ms. Irena G. Bondarik, Secretary General, National Committee of the Russian Federation on Irrigation and Drainage (RUCID), VNIIGiM, Room 6001B, B. Akademicheskaya ul. 44, 127550, Moscow, Russia, Tel/Fax: +7 095 153 94 06, E-mail: <ibond@online.ru, rusiptrid@mail.ru>.

22nd Congress, 65th IEC, 2014, Republic of Korea. Contact: Dr. Jin-Hoon JO, Secretary General, Korean National Committee on Irrigation and Drainage (KCID), 1031-7 Sa-dong, Sangnok-gu, Ansan-Si, Gyeonggi-do 425-170, Republic of Korea. Tel: +82 31 400 1755/1758, +82 31 400 1759, Fax: +82 31 406 7278, E-mail: <kcidkr@gmail.com, kcrid@ekr.or.kr>.

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